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CONTENTS AND SUBJECT INDEX

The Physician and the Patient of the Future. Wendell C. Phillips, M.D., New York 1259

Lymphoblastoma (Malignant Lymphoma): Age and Sex Incidence, Duration of Disease, and the Effect of Roentgen-Ray and Radium Irradiation and Surgery (Concluded). George R. Minot, M.D., and Raphael Isaacs, M.D., Boston 1265

Observations on the Etiology of Tumors as Evidenced by Experiments with a Chicken Sarcoma. James B. Murphy, M.D., New York.....1270

Relation of Anaphylaxis to Immunity, Studied by Passive Sensitization in Dogs. W. H. Manwaring, M.D.; R. W. Wright, and P. W. Shumaker, Stanford University, Calif.....1271

Value of Examination for Endameba Histolytica by Culture. J. H. St. John, M.D., Washington, D. C.....1272

Error of Basing Serum Diagnosis of Syphilis on the Kahn Reaction Alone. Sigmund S. Greenbaum, M.D., Philadelphia 1273

Modification of Present Methods of Gastroduodenostomy. Walter Hughson, M.D., Baltimore.....1275

A Comparative Method for Demonstration of Normal Development in Infancy. Arnold Gesell, M.D., New Haven, Conn. 1277

CLINICAL NOTES, SUGGESTIONS AND NEW INSTRUMENTS

Autotransplantation of a Toe for Traumatic Loss of a Finger. Joseph E. Fuld, M.D., New York.....1281

Modification of Turnbuckle Joint for Treatment of Scoliosis: Suggestion as to Management. Charles N. Pease, M.D., Chicago 1282

Some New Aspirating Devices. L. K. Ferguson, M.D., Philadelphia.....1283

A Peculiar Case of Transmission of Scarlatina. Dean P. Crowell, M.D., Albany, Ore. 1283

SPECIAL ARTICLE

The Technic of Medication: Seventeenth Article. Bernard Fantus, M.D., Chicago 1284

EDITORIALS

The Absorption of Lead Through the Skin 1286

The Hookworm Carrier.....1286

Creeping Eruption 1287

Salivary Digestion in the Stomach..1288

CURRENT COMMENT

The Omentum 1288

The Heart in Mercuric Chloride Poisoning 1289

The Intestinal Phase of Gastric Secretion 1289

The Search for Acute Febrile Anemia Is Begun 1289

(Subject Index on next page)

PROCEEDINGS OF THE DALLAS SESSION

Addresses of Executive Officers....1290

Reports of Officers.....1294

New Business.....1296

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SUBJECT INDEX TO THIS ISSUE

The letters used to explain in which department the matter indexed appears are as follows: The Star (*) indicates an Original Article; "ab," abstract; "E," Editorial; "C," Correspondence; "T," Therapeutics; "Ml," Medicolegal; "P," Propaganda for Reform; "ME," Medical Economics.

A. M. A., Dallas Session....1290
address of President-Elect Phillips....1293
address of President Haggard....1292
address of Speaker, Dr. Warnshuis....1290
Board of Trustees, report of....1294
Committee on Credentials, preliminary report....1290
Committee on Narcotic Drugs, report....1295
Committee on Trachoma among Indians, report....1296
Committee on Zinc Stearate, report....1296
Council on Medical Education and Hospital, report....1295
Council on Scientific Assembly, report....1295
House of Delegates, minutes....1290
Judicial Council, supplementary report....1294
radiogram from Dr. Simmons....1290
Reference Committees....1291
resolution on memory of Thomas A. McDavitt....1294
resolutions on ad interim meeting....1297
resolution on changes in premedical courses....1296
resolutions on contract practice....1297
resolutions on expert opinion evidence....1296
resolutions on home for incapacitated practitioners....1296
resolution on official recognition of irregular practitioners....1296
resolutions on trained nurses....1296
Secretary, report of....1294
Acne vulgaris, gastric acidity in....ab-1316
Actinomycosis, iodine in....ab-1320
Altitudes, high, oxygen inhalation in....ab-1325
Anaphylaxis vs. immunity....*1271
physical allergy causes dermatoses....ab-1316
Anemia, pernicious, atypical....ab-1319
acute febrile....E-1289
pernicious, mercurochrome in....ab-1317
splenic....ab-1317
splenic, splenectomy for....ab-1320
Aneurysm, bilateral renal....ab-1319
Angina pectoris....ab-1319
Aorta, abdominal, compression of....ab-1326
thoracic, rupture of....ab-1321
Appendicitis among Chinese....ab-1320
appendekthlipsia....ab-1326
Appetite, decreasing....1309
Aspirating devices....*1283
Association News....1290
Asthma and toxin-antitoxin....1309
due to egg....1308
Athlete, heart block in....ab-1322
Athletics vs. heart....ab-1326
Atropine vs. metabolism....ab-1323
Automobile driver, intoxicated....1301
"Autostasis" and medicine....ab-1326
Bismuth compounds, intramuscularly....ab-1316
Bladder, rupture during roentgen examination....ab-1323
Blood, acid-base equilibrium....ab-1318
acid-base balance in epilepsy....ab-1323
diastases in depancreatized dogs....ab-1315
pressure, changes after ramisection....ab-1322
pressure of Chinese....ab-1320
sugar tests compared....ab-1318
sugar vs. vagus....ab-1323
thiasine in....ab-1318
Bone, tumors, treatment....ab-1323
tuberculosis, blood changes in....ab-1325
Book Notices....1310
Books Received....1311
Breast cancer, radiotherapy....ab-1321
Bronchiectasis, drainage for....ab-1315
Calcium vs. metabolism....ab-1319
Cancer at Paris in 1826....ab-1322
exploratory excision in....ab-1325
in Massachusetts....ab-1317
incidence, near bakeries....C-1307
lead treatment....ab-1320, ab-1321
Carbohydrate metabolism vs. vegetative system....ab-1326
Carbuncle, treatment....ab-1321
Chemotherapy of infections....ab-1325
Chickenpox vs. herpes zoster....ab-1322
Children, mental development....1309
Chinese, appendicitis among....ab-1320
Cholesterol, metabolism in pregnancy....ab-1315
Chorea, autoserotherapy....ab-1319
Cocaine, chloroform sensitization of medulla for....ab-1323
Correspondence....1306
Couto, M., honors to....1303
Creatine, ingested, fate of....ab-1318
Creeping Disease....E-1287, ab-1316
Deaths....1305
Dermatoses, physical allergy causes....ab-1316
Dermoid cysts in young girls....ab-1320
Digestion, salivary, in stomach....E-1288
Dosage, ascending....*1284
descending....*1284
Drop dosage....*1284
Duodenum, drainage....1303
Dwarfism, congenital....ab-1324
Dystrophy, adiposogenital, eunuchoid....ab-1324
Eczema, treatment....1307
Egg, immunizing against....1308
Electrolyte equilibrium....ab-1318
Emigration and insurance....1301
Empyema, etiology....ab-1321
Encephalitis, epidemic, heart in....ab-1326
Endameba histolytica, examination....*1272
Epilepsy, treatment....ab-1321
blood, acid-base balance in....ab-1323
Epinephrine vs. metabolism....ab-1323
Evidence, seduction, profert of child....Ml-1313
witness, expert, when conclusive....Ml-1313
Fat, wool, vitamin A in....ab-1315
Fibrosarcoma of thyroid....ab-1317
Finger, autotransplantation of toe for....*1281
Flukes, snails carry....ab-1321
Food, glucose as food....C-1306
Foot, clubfoot, etiology....ab-1317
Foreign Letters....1301
Gallbladder disease, secondary evidence....ab-1315
Gastroduodenostomy....*1275
Gentian violet, use in gram stain....1308
Glucose as food....C-1306
Haff Disease....ab-1325
Health education from standpoint of public....*1260
education from standpoint of physician....*1261
education, address of Dr. Phillips....1293
public, congress, Brazil....1303
week, Germany....1304
Heart block, functional, in trained athlete....ab-1322
changes, myopathy with....1303
electrocardiogram, improvement of....1302
in mercuric chloride poisoning....E-1289
Hemorrhage, intracranial....ab-1326
sodium citrate for....ab-1318
Hernia, umbilical, operation for....ab-1317
Herpes zoster vs. chickenpox....ab-1322
Hip Joint, coxa vara, etiology....ab-1317
Hospitals, charitable, indemnity insurance as evidence....Ml-1312
Hyperthyroidism, iodine in....ab-1319
Immunity vs. anaphylaxis....*1271
Infants, new-born, biology of....ab-1325
new-born, vaccination against tuberculosis....ab-1322
normal development of....*1277
Infundibulum vs. pituitary....ab-1322
Insulin complement....ab-1326
Insurance, social, and emigration, England....1301
Intestines, secretion, vs. pancreatectomy....ab-1315
treatment of pinworm....1309
vs. gastric secretion....E-1289
Irish Medical Register....1301
Jaundice, infectious....ab-1324
Kahn Reaction, reliability....*1273
Kidney vs. high protein diet....ab-1318
prevention....1308
Labor, pulse volume in....ab-1326
Lead treatment of cancer....ab-1320, ab-1321
absorption, through skin....E-1286
Leishmaniasis, cutaneous reaction in....ab-1316
Lenticular Degeneration, pathogenesis....ab-1324
Leprosy in Japan, lepers....1302
Leukemia, acute lymphatic....ab-1320
Liquids, peroral administration....*1284
Lungs, roentgen study, lipiodol in....ab-1315
Lymphoblastoma (malignant lymphoma)....*1265
Maternal deaths, unexpected....ab-1321
Marriages....1305
Medical Education of future physician....*1262
Medical Education, Registration....1309
Medication, technic of....*1284
Medicine, progress, vs. physician....*1259
Medicolegal....1312
Meetings, Coming Meetings....1314
Melancholia vs. psychasthenic depression....ab-1326
Melanoderma vs. ovarian insufficiency....ab-1324
Meningitis, tuberculous, in infant....ab-1326
Menstruation of students....1302
Mercuric chloride poisoning, heart in....E-1289
Mercurochrome in typhoid....ab-1320
in pernicious anemia....ab-1317
Mesentery, rôle in visceral disorders....ab-1320
Metabolism vs. calcium and sodium salts....ab-1318
vs. epinephrine, atropine and pilocarpine....ab-1323
vs. testes....ab-1315
Milk, irradiated....ab-1325
Myopathy with heart changes....1303
Nephrectomy in infant....ab-1319
Nephritis, hemorrhagic....C-1307
Nerve, vagus, in hyperglycemia....ab-1323
Neuralgia, trigeminal, treatment....ab-1320
trigeminal, radical treatment....ab-1318
Neurosyphilis, treatment....ab-1321
News....1297
Omentum....E-1288
Osteomalacia in Kashmir....ab-1320
Ovary, insufficiency, bronzing and psychic disturbances....ab-1324
Pancreas, excision, blood diastases in....ab-1315
excision vs. succuss entericus....ab-1315
Parotitis, local immunity in....ab-1324
Peptic Ulcer, gastroduodenostomy for....*1275
Peritonitis, acute, treatment....ab-1319
Phosphatide metabolism in pregnancy....ab-1315
Physical examination, periodic....*1261, 1292
Physician and patient of future....*1259
Japanese, in North Sagalein and Siberia....1302
of Germany in 1925....1303
Pilocarpine vs. metabolism....ab-1323
Pituitary vs. infundibulotuberal region....ab-1322
Pneumothorax, artificial....ab-1316
Poliomyelitis, anterior, muscle reeducation in....ab-1319
Precipitin test, standardization....ab-1321
Pregnancy, acetonuria in....ab-1325
following thyroidectomy....1308
cholesterol and phosphatide metabolism in....ab-1315
latent syphilis and....ab-1324
tubal, cause....ab-1325
Prostatectomy, complications in....ab-1325
Protein diet, high, vs. kidney....ab-1318
Pulse volume in labor....ab-1326
Queries and Minor Notes....1307
Ramisection, arterial pressure after....ab-1322
Reticulo-Endothelial System and poisons....ab-1325
Rheumatism, acute articular, multiple heart disorders in....ab-1322
Roentgenograms, identification necessary....Ml-1314
Sarcoma, chicken....*1270
Salivary digestion in stomach....E-1288
Scarlet Fever, transmission....*1283
Sclerosis, disseminated, treatment....ab-1321
Serositis, tuberculous....ab-1323
Sex hormone, female....ab-1325
Skin, absorption of lead through....E-1286
Sodium salts vs. metabolism....ab-1318
Society Proceedings....1314
Spine, curvature, turnbuckle joint for....*1282
Stain, gram stain....1308
Staining intercellular substance....ab-1321
vital, in tuberculosis....ab-1315
Staphylococcus infections, chemotherapy....ab-1325
State Board Examinations....1309
Stomach acidity....ab-1319
pain....ab-1319
salivary digestion in....E-1288
secretion, intestinal phase of....E-1289
Surgery, aspirating devices....*1283
Syphilis, bismuth salicylate in....ab-1316
Kahn reaction for....*1273
latent, and pregnancy....ab-1324
sulpharsphenamine in....ab-1316
Tabla Anatomica....1302
Tattooing of female Ainus....1303
Telangiectases, roentgen ray, ultraviolet ray for....ab-1316
Test meals....ab-1326
Testes vs. metabolism....ab-1315
undescended, cancer of....ab-1323
Tetra-ethyl lead gasoline....E-1286
Thyroid, aberrant....ab-1318
fibrosarcoma....ab-1317
Thyroidectomy, pregnancy after....1308
Toe, autotransplantation for loss of finger....*1281
Tonics and Sedatives....**Adv. page 22**
Toxin-antitoxin and asthma....1309
Transplants, autotransplantation....*1281
Trichomonas vaginalis....ab-1325
Tuber Cinereum vs. pituitary....ab-1322
Tuberculin test, standardization....ab-1321
Tuberculosis, Dreyer's defatted antigen in....ab-1315
experimental, vital staining in....ab-1315
latent, in childhood....ab-1315
vaccination of new-born....ab-1322
Tumors, etiology....*1270
Typhoid, mercurochrome in....ab-1320
Ulcer, rodent, radiotherapy for....ab-1320
Uncinariasis, carrier....E-1286
Urethra, stenosis, perineum resection for....ab-1323
Vaccines, associated....ab-1323
sensitized bacterial....1308
therapy in children....ab-1325
Vitamin A in wool fat....ab-1315
Workmen's Compensation, accidental injury, disease as....Ml-1313
evidence, expert, when conclusive....Ml-1313

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THE PHYSICIAN AND THE PATIENT OF THE FUTURE*

WENDELL C. PHILLIPS, M.D.
NEW YORK

Who can visualize or define the physician and the patient of the future? Human progress has always been associated with epoch making discoveries, and medicine, with other sciences, has blazed an enviable trail along the pathway of the ages. The marvelous achievements of the men of medicine of today are largely the outgrowth and fruition of similar achievements of the founders of our art. The history of no other science contains brighter pages than those illumined by the scientific conquests of the great men of medicine. The new developments in medical science have created the necessity for changes in modes, methods and economies so far reaching as to affect all phases of national, family and individual life. The physician both of the present and of the future must be an integral part of our civilization and much concerned with its changes.

THE HERITAGE OF THE FUTURE PHYSICIAN

Human sympathy evolved a desire in men to relieve sickness and sorrow. Sixty centuries have elapsed since Egyptian medicine first made its imprint on humanity. The Greeks gave us a new conception of medicine as an art. True, the early leaders in medicine were not only physicians but also priests and philosophers with little knowledge of anatomy, physiology or chemistry; but they implanted into the basic structures of our science the spirit of the healer.

Born four hundred years before Christ, surrounded by all that Greek culture and education meant in that day, Hippocrates was justly acclaimed the ideal physician, the great teacher and the founder of modern medicine. He not only taught his pupils what he knew of medicine, but he ever insisted that they should enter into professional life with high ethical ideals, which time has never effaced. To him we owe the formulation of the renowned hippocratic oath. By that vow the physician pledged himself to his teachers, and to disseminate to those who followed him the knowledge that he acquired. He pledged himself to follow that system of treatment which, according to his ability and judgment, would be for the benefit of his patients, and to abstain from whatever is deleterious and mischievous. He foreswore all harmful methods and resolved himself to practice for the benefit of the sick. "Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad," he said, "I will not divulge, as reckoning that all such should be kept secret."

In those earlier periods, nothing was known of pathology and there was no scientific basis on which might be based a reasonable understanding of the causes of disease; nor had the physician or the patient the benefits to be derived from hospital or laboratory. But as time went on diphtheria, plague, tuberculosis, gynecologic diseases, obstetrics and affections of the eye, ear, nose and throat and many other diseases were fairly well defined.

The thirteenth century marked the foundation and rise of the universities and the gradual development of methodical medical studies. Dissection became more common; hence, the knowledge of anatomy and surgery progressed. Conscientious surgeons undertook serious operations without fear of criticism.

At this period few of the world's inhabitants reached adult life without an attack of smallpox. About 1796, Edward Jenner, practitioner of Gloucestershire, in England, boldly transferred cowpox infection from the hand of a young milkmaid into the arm of a young lad named Phipps, and immediately established the fact that immunity could be produced. As the result of vaccination, smallpox, the dread blemisher of human beauty and destroyer of human life, has become a thing of the past, except with people who foolishly neglect to avail themselves of the protection thus provided. But for Jenner's discovery, the faces of at least 50 per cent of this audience would be marred by pockmarks. The decimation of cities and communities from smallpox had continued throughout the centuries. But for this discovery, the continued high death rate from smallpox in foreign countries would have made it impossible for the United States in 1926 to have anything like a population of one hundred and ten million. In the light of this great discovery and boon to humanity, the proofs of which are positive and unassailable, is it not strange that prejudiced, benighted individuals and believers in cults like the antivivisectionists, the antivaccinationists, the chiropractors and the Christian scientists should presume to question the effectiveness of vaccination and unhumanly attempt by precept, by example and by propaganda to prevent its employment? Unfortunately, during the last few years in various parts of our country these forces for evil have succeeded in creating prejudice. Neglect of protective vaccination against smallpox has resulted in more or less alarming outbreaks of the disease. The state of Florida has just furnished an example of this kind. Wherever states have been lax regarding vac-

* President's address before the American Medical Association at the Seventy-Seventh Annual Session, Dallas, Texas, April, 1926.

cination of school children, smallpox has spread, and yet this disease is an example of contagious disease which we *know* can be prevented.

Louis Pasteur, father of the conception that bacteria (germs) are the direct cause of many diseases, gave to the world the key to the causes of putrid and suppurative diseases. Then came a positive demonstration of a specific germ—Robert Koch's discovery of the bacillus of tuberculosis.

Surgery adopted the principles first of antisepsis and later of asepsis. Few surgeons had ventured previously to perform major operations on the vital portions of the body, on account of the frightful mortality which resulted from suppuration. Joseph Lister, in 1878, showed how bacterial infection of wounds may be prevented by applying the principles of antisepsis in surgical operations. This momentous discovery revolutionized surgery and greatly lowered the mortality from surgical operations. Today surgeons, applying aseptic principles, do not hesitate to operate on any portion of the body, even the human heart.

In the fifty years since the discoveries that have just been mentioned, chemistry in medicine has made rapid strides, particularly in its relations to studies in physiology and metabolism. Chemical estimation of blood urea, proteins and gastro-intestinal contents and laboratory studies in cardiorenal and blood efficiency enable the physician to estimate the conditions of important organs of the body.

Meanwhile, physics, pathology, bacteriology, sanitation and preventive medicine have been developed to a high degree. The discovery of antitoxin for diphtheria has proved a boon to the child. The various animal carriers of disease have been determined and classified.

The work of Gorgas in making possible the building of the Panama Canal by the application of our knowledge of insect transmission of yellow fever and malaria, and the employment of antityphoid and paratyphoid vaccine, together with sanitation of water and food supplies, have practically annihilated these diseases. The future may bring about the complete eradication of diphtheria, scarlet fever, whooping cough, and possibly all the exanthems; while yellow fever, typhus fever and all plagues are falling before the gigantic march of preventive medicine, based on bacteriologic discoveries.

This has been the contribution of the physician to the march of human progress. Truly, neither the physician of the present nor the physician of the future need ever blush when contemplating his professional heritage.

CHANGES IN PRESENT-DAY MEDICAL PRACTICE

We build on the experience of the past. The rapid strides in medical discoveries of the last two generations, together with the more practical employment of sanitation and preventive medicine, have already effected great changes in the actual duties of the practicing physician. The daily round of our immediate predecessors was made up largely of the treatment of infectious and contagious diseases. The day-book of the family physician usually recorded visits to families for the treatment of measles, scarlet fever, diphtheria, typhoid fever or malaria only. He was educated to treat disease. He knew little of preventive medicine, sanitation or hygiene, nor did his medical education provide such knowledge. Older living practitioners know of the changes which mark the new era only by keeping abreast of the times.

National, state and municipal departments of health have gradually become powerful and controlling factors in preventive medicine, sanitation and hygiene. Health and welfare organizations, both national and local, have also invaded the field of preventive medicine. Great industrial organizations have introduced various health measures, believing it to be for their own best interests from an economical standpoint, as well as for the benefit of the hundreds of thousands of employees. Pay clinics and group practice have made some slight imprint on the modes of practice of today. Furthermore, the publicity work of all these agencies, together with that of our own Association, has gradually created a demand from the public for more information regarding personal health. The outcome of these measures has led to confusion regarding not only the present but also the future of medical practice. But the confusion of the present need never become chaos in the future, provided the medical profession prepares to meet the demands of the patients of the future.

HEALTH EDUCATION FROM THE STANDPOINT OF THE PUBLIC

The new era in medicine which the physician of the future must be prepared to enter must also rest on the foundation of a wide and comprehensive plan of personal and public health education. Professional policies, narrowly conceived, can never successfully oppose the rightful interest of the public. The failure properly to educate the public regarding the achievements of medicine and its importance in the preservation of life and the prevention of sickness may be considered as such a policy.

The editors of great daily newspapers and magazines, the newspaper syndicates, and university and public school teachers are calling on the medical profession as never before to enter this field. They properly contend that the educated physician must remain the source of personal and public health education. The *Saturday Evening Post* recently said that the "science of medicine, as far as laymen are concerned, is the most tongue-tied of all the learned professions." It called attention to the difficulties surrounding the scientific vocabulary of medicine as a means of teaching the public, and the shrinking attitude of the medical profession toward the lay press. Then followed the statement:

> The enlightened physician has a great body of news of the highest importance to communicate to nonmedical readers. When the medical profession becomes more fully awake to its responsibilities in this field, it is to be hoped that it will perceive the gravity and importance of its problem and attack it in force over a nation-wide front. Some national body, such as the American Medical Association, which has made such a good start along these lines, ought to take up the matter in a big way and work out a comprehensive program which would unify the efforts of the agencies already in the field, and cover the lay press of the whole country.

These friendly criticisms are perhaps well deserved. Our answer is that organized medicine has already entered this field. Considerable progress has been made in overcoming the reticence of medical men when called on to prepare health talks for audiences or the radio, or to write articles for lay publication. The prejudice that has existed against these measures is being dispelled. If the radio had been available during the ministry of the Great Physician, he would have made it hum and thrill while it adroitly advertised his message. The radio likewise should serve the physi-

cian and be made by him to illuminate his gospel of good health. Medical men now prepare articles for magazines, for the radio and for the public press covering all the phases of medical knowledge. I am proud to state with the greatest emphasis that the medical profession is well able to supply the brains for any and all nation-wide efforts for individual and community health education that the great business publications and the advertising world will undertake to promulgate and finance. This statement is the challenge of organized medicine! I pledge its fulfilment so far as lies within my power, and I sincerely hope that influential laymen of our country will accept the challenge.

Physicians until recently have contributed insufficiently to public health education. Today every licensed physician is being urged to prepare himself to teach his own patients the principles of health. Sufficient progress has already been made to warrant the statement that the field of public health education must and should be invaded by the physician. Organized medicine has approved this measure. The House of Delegates of the American Medical Association is on record as favoring every measure of public health education, including periodic medical examinations of the supposedly healthy. Two years ago the Board of Trustees entered this field on a larger scale by establishing *Hygeia,* a monthly public health journal published distinctly for the lay public. *Hygeia,* devoted to individual and community health, has already qualified as the leading public health journal of America. Its columns contain information of the utmost value covering the whole field of medicine. The lay reader is told what to do and what not to do regarding health affairs, and every issue contains exposures of vicious nostrums and quackery. Clip sheets from every issue of *Hygeia* are furnished to hundreds of newspapers, so that already millions of our people are receiving this direct and valuable health service.

Furthermore, many of our great newspaper syndicates, great daily newspapers and reputable magazines refuse to publish any material pertaining to health except on reliable medical approval. The propaganda of quackery and vicious nostrum advertising are refused by these great publications in the interest of the public health. Indeed, in health matters, many of these publications rely constantly on the advice received from the American Medical Association headquarters. Radio instruction in public health is rapidly increasing as a result of definite programs arranged by state and county medical societies. Other legitimate public health agencies are also active in this field.

PERIODIC PHYSICAL EXAMINATION

Periodic physical examination of the supposedly healthy is a public health measure that has the approval of the medical profession. The members of state and county medical societies are being urged not only to undertake the actual work of examination but to promote this healthful measure. The task of educating the one hundred and twenty million people of our country in personal and public health matters is stupendous, and its promulgation will require the combined efforts of medical men as teachers, of influential laymen and great publications as promoters. Physicians believe that whenever this great task shall have been accomplished in any nation, state or community, the average life of the inhabitants involved will be increased at least another seven years over the twenty that have been gained in the last half century.

Knowledge of the great principles involved in the preservation of health and of the great historical proof of preventive medicine will lead legislators and others in responsibility to protect every community against the blandishments of unlicensed quackery, the enmity of antimedical propagandists, and the evils of nostrum medication.

Public officials are already beginning to appreciate their responsibility regarding public health measures. In his recent message to the New York State legislature, Hon. Alfred E. Smith, governor of New York, proclaimed that "one of the great functions of government is the preservation of public health." He further said:

> I renew the recommendation of a year ago that careful consideration be given to the protection of the people of the state from unlicensed and unqualified persons practicing medicine. The cooperation of the medical profession is an essential factor in the protection of the public health, as well as in the care of the sick. A very large part of modern public health is urging people to get the advice of their physicians before serious and perhaps incurable conditions have developed. Such effort comes to naught if unqualified persons are allowed to hold themselves out as physicians. The subject is a difficult one, but the state of New York should take the lead in establishing high standards of medical practice, and providing a practicable plan for their enforcement. It is a matter of justice to qualified physicians and of protection to the public.

Let us hope that all state governors and all legislators will emulate the fine example of humanitarianism set by the governor of the Empire State.

HEALTH EDUCATION FROM THE STANDPOINT OF THE PHYSICIAN

The proposed campaign of public health education will surely create a demand for new contacts between patient and physician. Physicians must give a new significance to the word patient, for in the new order of things both sick and well people must and will be recorded in the lists of their physicians. In one of his recent addresses, Dr. George E. Vincent has called attention to the demands which this newly informed public is likely to make.

"They will demand that their needs should be met," he has said, and he warns that unless the medical profession shall organize to meet the demand in the proper spirit, various forms of state medicine are likely to become the order of the day. "No thoughtful person can welcome the extension of state medicine beyond the legitimate and necessary field of public health activity, but if private initiative and voluntary cooperation fail, it may be impossible to resist the demand for governmental intervention" in the practice of medicine. In other words, the state may be called on to organize and control not only methods of medical treatment but also the financial remuneration of the physician. I believe that this is unnecessary, but it surely will come unless we ourselves give heed to the coming needs and formulate our modes and methods to meet this demand in the spirit of true medicine. For medical agitators to stand on the housetops and shout defiance to state medicine will never solve a problem which can only be solved by perfecting a better way. The better way is to promote by precept and example the vast importance of maintaining the personal relationship of physician and patient. This is an essential fundamental in medical practice. For this principle, which the medical men of wide vision are contending today, no brighter example can be named than the late Sir James Mac-

kenzie. He was a far sighted student of mankind who devoted the later years of his life to preaching this beneficent gospel.

Wilson, a disciple of Mackenzie, in "Pygmalion, or the Doctor of the Future," outlines a most vivid picture of the spirit of medicine advocated by Sir James Mackenzie, emphasizing that the intimate relationship of the coming medical man with his patient is to become more intimate than our present-day leaders in medicine have demanded. "Once upon a time," he says, "the priest was the doctor," but, "tomorrow the doctor may well have become the priest, in a new sense of the word." Not deprecating the necessary scientific preparation for his calling, this physician of the future must be "a humanist, a man with the widest and deepest possible knowledge of human nature, and the profoundest possible understanding of human motives. He will be a cultured man, ripe in intellectual attainments, but not lacking in emotional sympathy, a lover of the arts as well as a student of sciences. This is, indeed, no more than a projection into the future of a gracious figure of the past—for the great physicians of other days were all, likewise, great citizens of humanity." There must be less of the machine or mechanical physician and more of the individual.

Our great leaders in medicine have emphasized fully the fact that this physician of the future, if he expects to meet the new demands in such a manner as to prevent the unfortunate entry into the practice of medicine of so-called state medicine, must prepare himself educationally, morally, psychologically and sociologically, to make the painstaking intimate personal contact with his individual patient so effective, outstanding and unassailable that no other form of medical practice will be permitted by the layman himself.

What have I described? No new word need be coined for the answer. The future health needs of the public can best be supplied by a more humane, painstaking, better qualified, general practitioner of medicine. The family physician should remain the foundation of medical service. His outlook, functions and training need modification to meet changing needs. The field will be great and the opportunity for service boundless. The loyal service of the ideal general practitioner of medicine will go far to limit the advent of insurance methods of treatment, state systems, industrial groups, and other socialized principles which the true psychologists and humanists in medicine look on as mechanistic, soulless, bureaucratic, card index systems, discounting the spirit of individual relationship characterized by the better way.

The gospel of good health is based largely on the principles of preventive medicine. Our Association endorses every proper method for promoting all phases of preventive medicine. Periodic examination of the apparently healthy is one of our projects which promises well for the future as an important agency for preservation of individual good health. The American Medical Association is pledged to this measure, and state and county societies are rapidly becoming alive to its importance. Sufficient progress has already been made to demonstrate the fact that many of the illnesses of life are unknown to the patient during the incipient stages. This procedure enables one's physician to detect the first danger signal of any form of disease and to cope with it during its incipient and curable stage.

This family physician must educate his patients and community in preventive medicine and be to some extent a health administrator. His chief rôle and his chief service will be to keep his patients well. Evidently, such service can be made possible only by maintaining intimate, clinical information, well recorded, regarding every man, woman and child who seeks his service. And every man, woman and child in every community should have his health recorded in the files of his family physician. Too many of our inhabitants worry through life with only fairly good health, and while they accomplish their daily duties, these fairly well persons may never know the exuberance and happiness of perfect health. Hence, one goal of the future practitioner of medicine will be the attainment and maintenance of exuberant health, which is the inherent right of every person. A higher average of overflowing good health means a higher average of happiness, comfort, usefulness and economic value of the individual. The superman will never materialize without superhealth.

THE EDUCATION OF THE FUTURE PHYSICIAN

Fundamentally, the business of the undergraduate medical school is to teach scientific medicine. The application of the science of medicine on the part of the physician constitutes the art of medicine, knowledge of which should be supplied by the undergraduate curriculum. At the outset it should be clearly affirmed with the fullest emphasis that the practice of medicine is in no wise a business, and those who purpose to enter this field of service should remember that their material interests must always remain a secondary consideration and that its emoluments may never be reckoned in terms of finance. The education of the physician of the future must provide instruction in the art of medicine as well as in the science of medicine—not less of science, but more of the art is the educational need of the hour.

This view of medical education of the physician presages the future output of medical men whose scientific thinking will smack less of the mechanical, less of the technic of the laboratory, and more in the terms of the humanist. He must be taught to think more in terms of life, health and humanity than of disease and death. The medical education of the present places too much emphasis on the material and too little on the spiritual phases of medical practice. The student of medicine must be taught how to care for and advise the man as well as the patient. To this end, nothing need be done to disturb the high standards of medical education which the American Medical Association has set. It is necessary, however, that greater elasticity be given through proper modification of the present curriculum and policies of medical education.

The student should come in contact in the ambulatory department and at the bedside with patients for self-study under proper guidance and control. His course should include neurology, psychiatry, dermatology and the study of the diseases of children. It should also include instruction on the principles of both general and special surgery. A reasonable time should be devoted to ophthalmology, to otolaryngology, and to genito-urinary and other special diseases.

I find myself in agreement with Billings that the ideal general practitioner "must have a good knowledge of general and physiologic chemistry, of human anatomy and physiology, of pharmacology, of general pathology with constant training through the four years

of residence in morbid anatomy, of epidemiology, immunology and psychology. In the clinical branches he must have the training of his brain, special senses and hands in the recognition of disease. He must learn to use the simple diagnostic aids in the form of instruments and laboratory tests. With this knowledge of the methods of diagnosis, he must have constant and daily opportunity to study disease as expressed in the ambulatory and ward patients. He must have an opportunity to observe the etiologic relations of occupations, environment, social conditions and other factors to disease. He must learn and recognize the importance of community as well as individual disease. He must have the opportunity to observe the results of medical treatment and management and the final condition of the patient after operative surgery. He must have an opportunity to witness minor surgical operations, emergency surgery, and especially to have practical training in the treatment of fractures of the bones and dislocations." In the hospital he should have an opportunity for the practical study of dietetics and of dietotherapy. He should have practical experience in the measures of disinfection in the sickroom and especially in the control of communicable diseases. "Finally, in addition to the educational qualifications, both academic and medical, the family physician must be a man of character. His daily life must be a practical expression of honesty, morality and resourcefulness in service to his patients. He will have a due consideration of his own health and responsibilities, and at proper periods will play as he works with well directed energy, giving and asking half the road and fair play."

That these changes in the curriculum may be brought about, influence should be brought to bear on the state licensing boards to abolish the nonsensical requirement of a stated number of hours of study in each branch of the curriculum. Obviously, a four year course of study of medicine, preclinical and clinical, is not too long, particularly in view of the fact that every student should receive additional common sense instruction in public health, preventive medicine, psychology and sociology so far as the term applies to the necessary alliance of medical and social sciences in the prevention and palliation of disease.

Every undergraduate medical school should make the necessary changes in the undergraduate curriculum to provide for these additional subjects. The curriculum should further provide instruction in principles of professional conduct and the highest ideals of medical ethics.

If our future practitioner fails in these things, his "place in the sun" will progressively diminish and his rôle will be invaded by industrial, state and various group practices which will be a great disadvantage to our inhabitants. The family physician should remain the foundation of medical service.

In view of these added requirements in the education of the future physician, it is unthinkable even to contemplate any lowering of the standards of medical education. Nor should a limited medical training be approved for men who might be willing to practice in rural communities. Any claim for a limited medical training is fallacious in reasoning and untenable, for the reason that the best in medical care is none too good for our lowliest inhabitants, no matter where they reside. It is sometimes argued that physicians of mature years, graduates of a former generation, have been successful even though the educational requirements of that day covered not more than two or three years. But it must be remembered that this was the full medical education for its day, and the graduates of that day have reached distinction in the profession and have made valuable contributions to medicine, surgery and pathology, not because of their limited medical education, but in spite of those limitations.

It is true that in certain limited areas in our land there is some scarcity of physicians. It is also a fact that for some years, particularly during the World War period, fewer men entered the medical schools; but soon after the war the numbers began to increase, and, according to the report of the Council on Medical Education and Hospitals of the American Medical Association, the higher entrance requirements are not preventing students from entering the field of medicine. The total enrolment of medical students in the United States since 1919 has increased at the rate of about one thousand a year, and in 1925 the approximate total enrolment of medical students in this country was 18,368. The proportion of students who are either partially or wholly self-supporting during their medical course is as large now as it was in the former days. Furthermore, the majority of the medical schools of the country are never able to accept all the students who clamor for admission. Possibly a larger number of medical schools should be provided in order to educate the number necessary to meet the needs of communities.

In view of the great expense involved in the maintenance of our medical schools, and in view of the fact that a large proportion of this expense is a contribution from philanthropic sources, every school should enroll the largest possible number of students. No school should reduce its enrolment to less than fifty students in a class, and the larger and better equipped schools should increase the number further to at least eighty or ninety to a class. Furthermore, the undergraduate medical school should limit its teaching to the output of all round qualified general practitioners of medicine only, and it should in no sense attempt to prepare men for the various specialties. Preparation for all the specialties should be entirely dependent on graduate schools of medicine. So far as our country is concerned, courses for specializing may be secured through graduate medical teachings in the universities and postgraduate schools. The courses for the majority of the specialties should cover a period of at least three years. In several of the specialties in this country, particularly the eye, ear, nose and throat, examination boards have been created for men who desire to be formally recognized by the national societies. Fortunately, it is no longer necessary for men to seek the graduate training in foreign countries. Under this scheme of education, every specialist must first receive the preliminary training required by the general practitioner of medicine.

Careful estimates would indicate that properly qualified general practitioners of medicine, aided by moderate home laboratory facilities, will be able to make a correct diagnosis and give all necessary instruction and treatment to at least 80 per cent of all the people who seek his aid, while 20 per cent of specialists, including internists and general surgeons, all thoroughly educated and trained, will be ample in number to care for the sick who need highly specialized service. Furthermore, the same proportion will to a large extent hold true of those who require hospital and special laboratory service.

Regarding the distribution of physicians throughout the country, it is a fact that the urban population has rapidly increased and now is in excess of the rural. This proportion of the general population is emphasized to a greater degree in the distribution of physicians. There are various explanations of this fact, the chief of which are the advent of the automobile and better living conditions, educational, social and otherwise, in the larger towns. "The properly trained and educated young general practitioner, the product of the medical school which has made its curriculum elastic and modified to make a practitioner, will be fit to practice in either the city or the country. To induce him to go to the country will require improvement in social and educational opportunity in rural districts. This is rapidly coming about, but needs stimulation through cooperative endeavor from the medical profession, educators of the country and other agencies who will bring about better schools and facilities for social enjoyment."

NEED OF HOSPITALS

Time will permit only a brief mention of the hospital as a necessary facility in medical practice. At present, 25 per cent or less of the practitioners, both city and country, have hospital facilities. Hospitals or similar facilities for the application of the refinements in diagnosis and treatment should be available in all communities, and particularly in rural districts. At present it seems somewhat difficult to supply proper hospital facilities in many rural communities, but our proposed extensive program of public health education should lead the enlightened laity to meet this demand. Every physician should be in contact with hospital facilities and experience—his progress in his profession depends on it. In every instance, particularly in rural communities, open staff organization is preferred; but hospitals connected with medical schools must necessarily be closed-staff organizations. It is possible that in other hospitals the open-staff organization could be made practicable by having a so-called executive staff or regular attendants in all departments who would be responsible for the character of the professional conduct of the hospital, and this staff would be supplemented by an auxiliary or associated staff properly classified and made associate members of the executive staff departments. This would afford every worthy physician of the community a hospital connection, but he would be obliged to follow the regulations of the hospital made and adopted by the executive staff.

CONCLUSIONS

May I venture the following conclusions and opinions:

The scheme of undergraduate medical education should be reconstructed to include in its curriculum as a prominent feature the science and art of health conservation, and the art of applying the principles of the science of medicine through the personal relationship of the physician and his patient. The undergraduate student must be trained to treat the body from the standpoint of health as well as that of disease.

These added requirements to the educational program of the future physician emphasize the argument against any lowering of the standards of medical education or lessening of the time involved in the teaching process.

Public health education is an outstanding need of the hour. The gospel of personal and community health is complex. It should be promulgated by health departments and agencies, by lectures, radio and film; but it will never reach its highest efficiency until it includes a maximum of direct personal instruction by properly qualified family physicians.

The patient of the future, in view of his perfected health education, may be expected to derive from it a wise judgment which will lead him to seek the continued advice and counsel of his personal physician. Furthermore, in view of our perfected system of individual and community health education, cults and other menaces to public health, all of which are founded on theories for the most part baseless and futile, will gradually disappear before the rising sun of enlightened public opinion.

The ideal family physician of the future by training, by experience, and by expert knowledge of health conservation will derive a potential power which will qualify him to control and direct the health problems of men.

The family physician of the future must have proportionate representation in the councils of his profession. No specialty or combination of specialties, not even general surgery, should be permitted to dominate the health affairs of a community or of a nation.

It is true that the service rendered by a physician may not be considered in terms of finance, but in no sense should our physician of the future offer this as an excuse for slothfulness in the management of his business affairs. Every detail of his newer service in the prevention of disease is of great value to his patient. Health education and conservation are services of value even greater to the patient than the sums paid for helping the body to repair the ravages of disease.

The maintenance of individual practice in the person of the general practitioner or family physician is of the utmost importance for the survival and continuation of the family home as the foundation of the nation.

Finally, let us hope that the physician of the future will be fully conscious of the vastness of the causes which he must advocate and the usefulness of the deeds he must accomplish; that he may have wisdom, poise and capacity of understanding that will breed in his patient an extraordinary confidence and esteem; that he may have a vision of a healthier, happier world which will blossom into unheard of activity. May we hope that to this end he will dedicate himself "through service to all that will advance and maintain and increase the sum of human happiness."

Every man who looks toward the future is charged with being a dreamer. But the verdict of history has always been that the onward march of science, religion and civilization has been led by dreamers. I have ventured modestly to tell my dream, knowing that it will find a thousand responsive cords in the hearts of my colleagues whose ambition and passion is to serve our fellow-men.

> Who dreams shall live. And if we do not dream
> Then we shall build no temple into time.
> Yon dust cloud, whirling slow against the sun,
> Was yesterday's cathedral, stirred to gold
> By heedless footsteps of a passing world.
> The faiths of stone and steel are failed of proof,
> The king who made religion of a sword
> Passes, and is forgotten in a day.
> The crown he wore rots at a lily's root,
> The rose unfurls her banners o'er his dust.
> The dreamer dies, but never dies the dream.

Though Death shall call the whirlwind to his aid.
Enlist men's passions, trick their hearts with hate,
Still shall the vision live. Say nevermore
That dreams are fragile things. What else endures
Of all this broken world save only dreams!
—*Dana Burnet.*

30 East Fifty-Eighth Street.

LYMPHOBLASTOMA (MALIGNANT LYMPHOMA)

AGE AND SEX INCIDENCE, DURATION OF DISEASE, AND THE EFFECT OF ROENTGEN-RAY AND RADIUM IRRADIATION AND SURGERY

GEORGE R. MINOT, M.D.
AND
RAPHAEL ISAACS, M.D.
BOSTON

(Concluded from page 1189)

INFLUENCE OF AGE AND SEX ON DURATION

Age and sex influence the duration of the types of lymphoblastoma under discussion, as well as the acute and chronic forms of lymphatic and myelogenous leukemia. These factors are to be recalled in considering the effect of therapy.

The data show that among the males the chance for a long duration of lymphoblastoma is definitely greater for those over 34 and under 65 years of age than for those below 25. For the age periods 0-14 and 15-24, about 75 per cent of the males died within 2.5 years, and only 5 per cent lived six or more years after the onset of illness. This is in contrast to the facts that 63 + per cent of both those aged 45-54 and 55-64 died within 2.5 years, and 18 and 8 per cent of each group, respectively, had their disease for more than six years. Figures of the same sort for the two decades between 25 and 45 are much alike and intermediate between those for young and relatively old ages.

The females in the age groups 0-14, 15-24, etc., up to the age of 55 showed, except in one group (25-34) a lower or equal incidence than males for a disease duration of 2.5 years or less. The lowest parcentages were 50, 57 and 52, respectively, for the ages 0-14, 15-24 and 35-44, and 30, 14 and 27 per cent, respectively, for the cases at these ages lasting six years or more. None of the females in the age groups 25-34 and 55-64 had their disease more than six years, and 77 per cent in the latter group died within 2.5 years after the initial symptoms. Comparable figures for the women from 45 to 54 are intermediate between those for the latter and the former groups.

The men 65 years of age and over had lymphoblastoma distinctly longer than the women of this age. At this time in life the factor "life expectancy" becomes an important one to reckon with when drawing conclusions. Thus, without taking into consideration persons over 65, the duration of lymphoblastoma in females tends to be longer than in males, being longer in men 35 years or more of age and in women under 25 years of age than in younger males and older women, except when the latter are from 35 to 44 years old. It may be noted that at the ages when females are relatively susceptible to lymphoblastoma the duration of disease seems to be longer than at other times. On the contrary, at the ages when the incidence in males is high the duration is apt to be shorter than when such is not the case. This rather peculiar difference is open to speculation. Averaged data concerning the duration of lymphoblastoma as related to age and sex are presented in chart 8, and the absolute number of cases composing the different age groups is listed in table 1. The chart shows in a different manner what has been recorded above.

The separate data for males and females treated and not treated with irradiation at different ages is relatively scant. No distinction in favor of irradiation can be observed between comparable groups, except that perhaps it influenced beneficially the duration of life of some males and females whose age was the same as those noted above to live the longest after the appearance of symptoms referable to lymphoblastoma.

To illustrate further that women live longer than men after lymphoblastoma develops, and that most of the cases of short duration occur in males, the percentage of males composing each group of patients having their disease for one, two, three, etc., years is shown in chart 9.

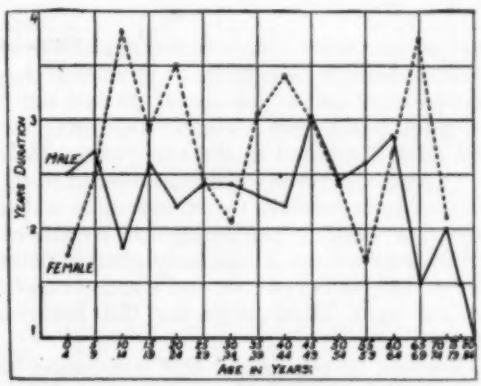

Chart 8.—Average duration of lymphoblastoma in those patients who had their disease less than ten years, with reference to the ages at onset, excluding one girl, aged 7, whose disease lasted nine years: solid line, males (277 cases); broken line, females (116 cases).

ESPECIAL INFLUENCE OF AGE ON DURATION OF DISEASE IN IRRADIATED AND NON-IRRADIATED PATIENTS

The duration frequency for three groups of cases, those lasting up to three, from three to six, and six or more years, correlated with the age of the patients is presented graphically in chart 10. The lines in this chart illustrate one more way of considering the influence of age on duration without taking into account the factor of sex or treatment. The data plotted similarly, but separately, for the irradiated and nonirradiated patients do show differences. There is, however, no distinction between that for the thirty irradiated and the thirteen that were not, who had their disease six years or more. The age distribution of the irradiated patients (158) with a duration of less than three years yields a curve very much like that in chart 10 for all cases of this duration. On the contrary, the nonirradiated patients (115) with a duration of less than three years have an incidence of about 7 per cent less for the age groups 0-14, and 15-24, and about 9 per cent greater for the age groups 25-34 and 45-54. Similarly constructed curves for cases of from three to six years' duration in which the patients were treated and not treated with irradiation differ considerably. That for the nonirradiated group (thirty-six patients) to the age of 54 is somewhat like that in chart 10 for all cases of this duration, the chief difference being an incidence

that is 10 per cent less at the ages 25-34. Then there occurs at the ages 55-64 a rise to 23 per cent, or 10 per cent more than for all cases at these ages. The age distribution curve for the fifty-two irradiated patients with a duration of from three to six years shows a peak of 28 per cent incidence at the ages 25-34, rising rapidly from 6 per cent for those 0-14 years old and 15 per cent for the 15-24 age group. After the peak, the curve falls first slowly to 25 per cent for the 35-44 age group, and then rapidly, but constantly, to 5 per cent for the ages 55-64 years. Thus, the chief difference in the percentage distribution between the irradiated and non-

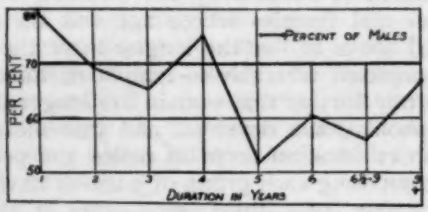

Chart 9.—Duration of lymphoblastoma: percentage of male patients having the disease for different periods of time. Of all 401 patients, 70 per cent were males.

irradiated patients with similar duration and like age was as follows: A greater percentage of irradiated than nonirradiated patients below the age of 24 had the disease less than three years, and a greater percentage of nonirradiated than irradiated in the age groups 25-34, and 45-54 had lymphoblastoma for this amount of time. The distinction between the three to six year cases is that there is a somewhat smaller percentage of irradiated ones in the 15-24 year group, a distinctly greater percentage in the 25-44 year period of life, and a much rarer occurrence at the ages 55-64 than for the nonirradiated patients.

Thus, it might be considered that irradiation had not influenced the duration of the cases lasting six or more years, yet had doubled the chances of persons from 25 to 45 years old having their disease from three to six years, and that it had influenced some groups less markedly, and others not at all or unfavorably. A similar tendency for irradiation to enhance apparently the chances of cases of chronic myelogenous leukemia to last from three to six years has been noted.[8] The treatment may be blamed for the greater incidence of irradiated than nonirradiated patients below the age of 24 with lymphoblastoma of short duration. The high frequency in young males of acute types of lymphoblastoma who happened to be irradiated more often than not may account for this great incidence of cases with irradiation. On the contrary, there is considerable evidence at hand that it is exceedingly easy for irradiation to cause a rapid dissemination of Hodgkin's disease, which composes the majority of the cases of lymphoblastoma in youth. Irradiation in what is often considered suitable therapeutic doses can lead to injury of the lymphoid tissue, and there occurs in Hodgkin's disease progressive sclerosis of this tissue, which is reflected in the peripheral blood by the characteristic lymphopenia. Thus, such treatment in undesirable amounts may intensify the process, so that an increased rate of progress of the disease ensues although a decrease occurs in the size of the irradiated lesion. Such overdosage may well account for the high incidence of irradiated cases of short duration in youth. A similar effect may occur in other types or groups of cases, but is not so distinct as for the patients with Hodgkin's disease.

TREATMENT OF CASES OF LYMPHOBLASTOMA OF SIX OF MORE YEARS' DURATION

A tabular view of sixty cases (thirty-nine patients dead [9] and twenty-one living) that have had some form of lymphoblastoma for six years or more is presented in table 2. The incidence among the 401 dead patients having their disease this length of time is about 10 per cent, which is essentially the same percentage as for those irradiated and those that were not. However, among the seventy-six living patients there are now twenty-one (27 per cent) who have had their disease this long. One has had no treatment of any sort, and the others have been treated with roentgen rays or radium, with or without surgery. Among the dead patients only ten (25 per cent) of the thirty-nine were considered to have been irradiated early so far as the character of the disease was concerned. Seven of these were treated also by surgical measures. There were three patients who underwent a therapeutic surgical operation early, but were never irradiated. Fifteen of the twenty-one living patients were irradiated first when their disease was in its early stages, and eleven of them had surgical treatment. Thus it may be noted that the percentage of patients that have had lymphoblastoma for six years or more approaches three times as great a figure for the living as for the dead. In turn, nearly three times as many living as dead patients received early treatment. Offhand, it would seem that the incidence of long duration had been increased by early treatment or modern methods, and, although this may be so, various other factors than treatment can account for this high incidence. The percentage frequency of cases lasting long is about the same for each of four groups of patients first coming to the clinic in four equal periods of time since the year 1900. This suggests that with irradiation and the improvement in irradiation methods the duration of the disease has not been influenced favorably. It must be appreciated that as time passes by there is an accumulation among the living patients of cases that are of particularly long duration. Likewise, the statistics must be considered with the knowledge that living patients accepted for study in the past year have been fewer than in recent years, and a tendency to select cases has probably occurred within two years, so that the total number of living patients may be proportionately few, compared to other times.[10] Also, unconsciously a greater effort has been made to keep track of cases of long than of briefer duration, so that perhaps all of long duration are listed and undoubtedly some of short duration excluded.

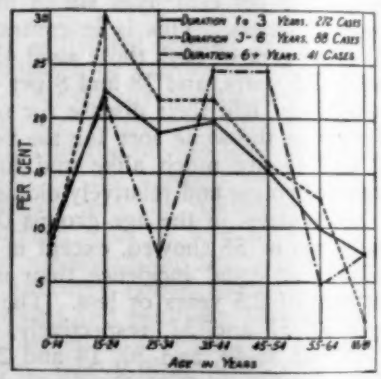

Chart 10.—Duration of lymphoblastoma: Curves showing age distribution of all patients (dead) whose disease lasted up to three years (272, solid line), from three to six years (eighty-eight, broken line), and six years or longer (forty-one, dash-dot line).

9. Two of the total forty-one are not included.

10. That this is so is shown by the fact that in the four months since the data were compiled the number having lymphoblastoma six years or more remains the same. On the contrary, fifteen new cases have been seen; and none are of more than four years' duration. Three of the patients previously alive have died. Thus, the living patients now total eighty-eight rather than seventy-six, which would decrease the percentage frequency of long cases among the living patients.

Following the initial symptoms of all these patients who had lymphoblastoma for a long time, the progress of disease as a rule was slow; and although surgical or irradiation treatment may have been undertaken in an early stage, this at times was a few years, even up to eight, after onset. There appears to be a definitely greater percentage of such instances among the living than the dead patients, so that by chance there are relatively more among the living whose disease remained local a long time before treatment was begun. Thus, therapy cannot be the sole reason for the unusual duration. The type of case that naturally lasts long is the one with a slow rate of progress early, spontaneous remissions, and apparently with the initial lesions developing particularly in parts of the body readily accessible for therapy. This permits a good opportunity for diagnosis before the disease is advanced, and thus treatment may be given at a desirable time. It is just such cases that are frequent among this group of living patients treated early in their disease. In view of the control series of cases, together with other aspects referred to above, it certainly seems as if treatment had not played the entire part in increasing the incidence of cases of long duration among the living, eleven of whom at present appear healthy.

Be this as it may, it does remain true and noteworthy that there is a high frequency among the cases of long duration of those treated early by surgery and irradiation, the latter being continued in a suitable manner. It becomes difficult not to believe that therapy does, at least sometimes, influence the duration of the disease. Even so, the facts might not be reconciled in this way; for it is true that similar cases, either with or without any irradiation or surgery, or such treatment only very late in the course of the disease, are alike in duration, and that among the cases of all types are some with long intervals, even years, between irradiation treatments.

A few notes are given regarding several cases to illustrate certain points, including how treatment must in all reasonable certainty be able to lengthen the life of a patient with lymphoblastoma.

Complete removal of diseased tissue by surgical measures was done early in very few cases. One boy, now 15, had the diseased nodes in his neck removed nine years ago, when no other enlarged ones were detected. The pathologic examination of the tissue undoubtedly shows lymphoblastoma and apparently of the Hodgkin type. A series of radium treatments was given during the two years after the operation. About a year after operation, there appeared slight enlargement of nodes in the vicinity of the scar, but none since. This boy has had no irradiation or especial treatment for more than six years and appears well in all respects. One woman with Hodgkin's disease, who had surgical and irradiation treatment early, showed at that time enlarged lymph nodes in various parts of her body, which fluctuated in size during the following five years. She has been given no irradiation in the last four years, and there have been no detectable symptoms or signs of disease during this time, except that her blood picture has shown a progressive lymphopenia. It must be recalled that with or without treatment of the patient symptoms may be absent for a number of years. It is believed that the boy may be cured of lymphoblastoma, but that this woman, especially on account of her blood picture, will develop serious symptoms before long. One can decide if he chooses that treatment has not affected the duration of either case, and somewhat similar cases without especial treatment make this assumption tenable.

Cunningham[11] has recorded a case of Hodgkin's disease of twenty-five years' duration. The longest dura-

TABLE 2.—*Lymphoblastoma of Six or More Years' Duration*

Type of Case; Number; Sex		Duration: 9 Years or More	Duration: 5 or More Years after Pathologic Diagnosis	Location Where Lesion First Noted; Number of Cases	Treatment (Often Long Periods Without Any): Arsenic or No Therapy	Stage of Disease	Surgery	Surgery and Roentgen-Ray or Radium	Roentgen-Ray or Radium
Hodgkin's*	19	4 cases (3 ♀); longest, 17¾ years	15 cases; longest, 13 years	Neck	16	3	Early	2	7**	1
Male	8			Axilla	2		Middle	0	0	3
Female	11			Groin	1		Late	0	0	3
Lymphosarcoma†	23	6 cases (3 ♀); longest, 16 years	16 cases; longest, 13 years	Neck	10	1	Early	2	10 (roentgen-ray late in one)	3
Male	12			Tonsil	1					
Female	11			Nose and sinus	2		Middle	0	2	3
				Eye	2		Late	0	0	2
				Abdomen	6				(10 living)	(1 living)
				Groin	2					
Pseudoleukemia‡	13	5 cases (1 ♀); longest, 12 years	6 cases; longest, 7 years	Neck	8	5	Early	1	0	3
Male	10			Groin	2		Middle	0	0	2
Female	3			Spleen	2		Late	0	0	2
				Abdomen	1					
Lymphoblastoma, unclassified§	5	1 case (1 ♀) longest, 3 years	2 cases; longest, 6 years	Neck	2	1	Early	0	1	1
Male	3			Eye	1		Middle	1	0	0
Female	2			Axilla	1		Late	0	0	1
				Abdomen	1					

Total, 60; male, 33 (55%); female, 27 (45%). Dead, 39; living, 21.

* In the Hodgkin's group the disease became slowly generalized. Spleen enlarged late. In thirteen cases abnormal nodes were in two locations within three years of onset; and in two cases within a year. In three others they did not occur in more than one location until five years or more. In one (eight and one half years' duration) of four living patients there have been no signs of disease for five years.

** In two, roentgen ray not for several years after surgical treatment.

† Twelve of the lymphosarcoma group are dead. One died of heart disease without recurrence of the lymphoblastoma. In one the disease remained confined to the head region, and in one almost entirely to the abdomen. The disease became generalized in nine; in one of which the original lesion was in the vicinity of the eye. It was generalized in four in from three to four years after onset, in two in five years, in three in from seven to thirteen years. Eleven are living. In four the disease is generalized and it began in the neck, abdomen or eye region. No recurrence has been noted in five patients whose initial lesions were in the neck for two cases, and in the rectum, nasal and eye region for the other three. The disease remains local in two cases; in the mediastinum of one, and in the pelvis of another. The spleens of these twenty-three patients were seldom enlarged more than slightly. Roentgen ray or radium often improved the patient's health greatly and caused rapid shrinkage of masses.

‡ In the cases called pseudoleukemia, frequently no treatment with roentgen ray or radium was given for from four to six years. Such treatment caused less striking effects than in the cases of lymphosarcoma. The disease became generalized in less than one and one-half years in all the cases of pseudoleukemia, except in one patient now living. Abdominal masses were present in all but one of the ten deceased patients. These masses were often present early in the disease, when the spleen was usually enlarged. Prominent symptoms usually did not appear until four years after onset of the disease.

§ In the unclassified cases of lymphoblastoma the disease became generalized in three, and in one remains confined to the eye region and in another to the abdomen.

11. Cunningham, W. F.: Hodgkin's Disease: A Study of a Series of Twenty-Five Cases, Am. J. M. Sc. **150**: 868 (Dec.) 1915.

tion of lymphoblastoma in the present series was seventeen and three-fourths years. The patient was a girl, aged 12 at the onset of her illness, and she never was treated by irradiation or surgery. The diagnosis was established by microscopic examination of an excised lymph node thirteen years before her death. Intermittently for years there was swelling of nodes in the neck, with a slow involvement of other nodes and enlargement of the spleen. Finally, two years before death, essentially all external and internal nodes became enlarged.

Among the patients whose disease was termed lymphosarcoma is one who had a tumor of this sort removed by resection of a portion of the small intestine at a time when no other evidence of disease existed. Following the operation, this patient had no symptoms for seven years. Then there appeared multiple masses in the abdomen with enlargement of nodes in the groin, and she died nine years after the onset of symptoms. Similar instances are reported in the literature,[12] but none with such a type of lymphoblastoma have lived so long after initial symptoms except following surgical treatment. Thus it seems logical to attribute the long duration to surgical intervention. Another patient, one with a lymphosarcoma of the rectum, appears now entirely well, after very complete treatment with irradiation that was last administered five years ago. A somewhat similar state of affairs holds for a patient whose lesion has been confined to the neck, and for another in whom the disease was in the nasal region. The mediastinal case of long duration, first treated with roentgen rays early, has been reported by Holmes.[13] After the cases in table 2 had been listed, it was noted that no surgical procedure was undertaken on those of long duration called pseudoleukemia. The reason for this is simple to understand; namely, this type of lymphoblastoma becomes generalized early, so that at the time the patients are seen or a diagnosis made there is no single local lesion for operation.

DURATION OF CASES IN WHICH IRRADIATION WAS DONE EARLY

A survey has been made concerning the duration of lymphoblastoma in cases selected because it was believed that the patients had had early and adequately continued irradiation treatment. These patients are now all dead. Fifty-four were selected to compose one group because they first received irradiation early so far as the disease state was concerned; i. e., when relatively local, when toxemia signs and symptoms and the like had not occurred. A second group of eighty-one cases was chosen because irradiation was begun before 33 per cent of the duration of each patient's illness had occurred (i. e., for example, two months or less for disease with a duration of six months; two years or less for disease with a duration of six years).

The frequency of the different durations of lymphoblastoma for each of these two groups is contrasted in chart 11 with that for: (1) 184 cases treated with irradiation late in the course of the disease so far as its character was concerned; (2) 157 cases treated with irradiation after 33 per cent of the disease duration had taken place; (3) 163 cases not treated with irradiation.

The length of the disease in those irradiated and not so treated has been shown for half-year periods in chart 6, and is shown in chart 11 for yearly periods. No further comment of a comparative sort on these data is required.

The data yield curves for the different groups of irradiated patients that are very similar except for those treated early so far as the state of their disease was concerned. This would suggest that, no matter whether irradiation is begun when a small or large percentage of the duration of disease has occurred, the influence of this treatment on duration was nil. On the contrary, the data for the fifty-four cases treated with irradiation early so far as the disease state was concerned indicate that the chances of these patients having their disease long were relatively great. However, one is forced to recognize that it is a case of this type that is apt to last a long time without any special treatment. These fifty-four cases usually developed slowly, so that though a long time occasionally occurred from onset to diagnosis, during the interval progress was slight. In many other cases a more rapid progress occurred, and though it may have taken the same long time for the patient to obtain a diagnosis, the disease, unfortunately, was relatively advanced and so treatment was not begun until late. Furthermore, any case among those treated by irradiation early so far as the disease state was concerned can be paralleled by a similar case of like duration that was not treated with irradiation or not given such treatment until a far-advanced stage of the disease had been reached. Thus, in spite of the fact that patients irradiated when lymphoblastoma had progressed but little have lived with their disease relatively long, there are reasons for not attributing this desirable circumstance to the therapy alone.

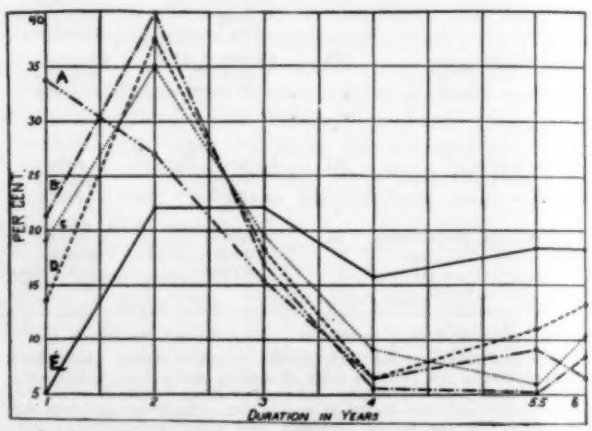

Chart 11.—Percentage frequency of the duration of lymphoblastoma in groups of patients selected with reference to when roentgen-ray or radium treatment was first begun: *A*, 163 patients not treated with roentgen ray or radium; *B*, 184 patients treated late, with reference to the character of the disease; *C*, 157 patients not treated early; irradiation therapy started after 33 per cent of the disease had passed; *D*, eighty-one patients irradiated early (38 per cent of all irradiated) in that treatment was begun before 33 per cent of the total duration of the disease (in each case) had occurred; of the eighty-one, 22 per cent had surgical treatment; *E*, fifty-four patients irradiated early (22 per cent of all irradiated), so far as the disease state was concerned; nineteen of the fifty-four (35 per cent) also had surgical treatment.

CONCLUDING COMMENTS ON THERAPY

There is, of course, no question but that lymphoblastoma lesions may regress in size either spontaneously or as the result of irradiation. There is evidence also that the administration of arsenic, perhaps especially in the form of one of the newer arsphenamine-like preparations, can influence favorably the patient and the size of his lesions. However, this happens much more frequently and as a rule is more marked following irradiation than occurs naturally or after treatment with any

12. Graves, S.: Duration of Lymphoblastoma of the Intestine, J. M. Research **40**: 415 (Sept.) 1919.
13. Holmes, G. W., in Case Clinics of Massachusetts General Hospital, Case 10432, Boston M. & S. J. **191**: 783 (Oct. 23) 1924.

drug. Likewise, though the lesions may remain small for from weeks to years, they are much more apt to do so for a long time when irradiation has been given than when it has not. Such treatment is undoubtedly valuable since it improves the patient's efficiency and alleviates symptoms. The present methods of irradiation are better than former ones because the dangers of heavy and too constant dosage have been learned, the amount given can be controlled accurately, and roentgen-ray sickness and undesirable effects on the marrow minimized. In spite of the fact that the statistics for groups of cases show that irradiation has not prolonged significantly the duration of lymphoblastoma, it does seem as if in certain instances it did so. Besides cases of this sort cited above, one cannot help being impressed by the fact that patients with lymphoblastoma and apparently near death constantly are seen to be relieved by irradiation, and at times even restored to apparently normal health. For example, large masses in the thorax may cause partial suffocation; the patient becomes desperately ill, and irradiation appears to prevent death at that time. Perhaps some extension of life can be attributed to such therapy when death is at hand from a mechanical cause, especially when developing relatively soon after onset, and that otherwise irradiation does not influence the progress of disease. This is similar to the prevention of death from starvation of a patient with cancer of the esophagus, by the administration of food through a stoma in the stomach. Although irradiation occasionally may influence duration desirably, it can also shorten life if not given wisely. The occurrence of such cases may counterbalance in the statistics the slightly increased duration of lymphoblastoma produced in patients with much mediastinal pressure and the like and perhaps in some first irradiated very early. However this may be, there is no definite evidence that irradiation has prolonged distinctly the duration when a group of cases is considered as a whole.

Neither roentgen rays nor radon should be given in a repeated, perfunctory, routine manner. The state of the patient, his blood, and the precise character of the case all require evaluation in order to give the most suitable irradiation. Also, we have noted that the basal metabolic rate may serve as a guide to treatment not only for cases of lymphatic leukemia but also for the other forms of lymphoblastoma. Irradiation seems desirable when the metabolism is elevated. This may occur when lesions are small and when treatment would not be considered wise so far as their size alone is concerned. Such matters are not for discussion here, but it is pointed out that although the statistical data have been obtained without taking into account the nature of the case as regards the location of the initial lesions or what parts of the body are prominently involved, there are some differences for the duration of lymphoblastoma according to the particular mode of onset and developments of the pathologic process. These differences do not appear to cause any essential change in the facts presented in the contrasted data, as the variety of types of cases composing contrasted groups were similar, except as have been described.

The value of surgical treatment of lymphoblastoma is not to be neglected. Surgical intervention relatively late in the disease is of very problematic use and best never be considered. However, it is logical, as Yates and Bunting [14] have shown, to expect benefit from complete, not partial, removal of the diseased tissue, especially in that type of case that appears to have a single seat rather than multiple places of origin. There is some rather definite evidence at hand that, following incomplete surgical removal of lymphomatous masses, the disease then may spread with greater rapidity than if no operation had been done, and wounds of such tissue tend to heal sluggishly. Unfortunately, the opportunity for radical surgical treatment early is infrequent, as these patients usually do not obtain a correct diagnosis for many months after the onset of their illness. It is, indeed, a striking fact that patients with lymphoblastoma, particularly when some external lymph nodes are but slightly enlarged, or none appear to be, form a group that puzzles many physicians. A correct diagnosis of a form of lymphoblastoma made only when a case is far advanced is vastly too common.

The data in table 2, as well as other information, do suggest that early complete removal by surgery of lymphoblastoma offers patients an opportunity for life extension and perhaps actual cure. Surgery most certainly is not to be employed indiscriminately, nor had it best be used for merely partial removal of lymphoblastomatous tissue in the body. Following operation, the administration to these patients of suitable irradiation appears wise.

14. Yates, J. L., and Bunting, C. H.: The Rational Treatment of Hodgkin's Disease, J. A. M. A. 64: 1953 (June 12) 1915. Yates, J. L.: The Proper Treatment of Chronic Malign Diseases of the Superficial Lymph Glands, Arch. Surg. 5: 65 (July) 1922.

SUMMARY

Four hundred and seventy-seven cases of all types of lymphoblastoma, excluding lymphatic leukemia, have been studied. Four hundred and one of the patients are dead; 238 were treated by roentgen-ray or radium irradiations, and 163 were not. Sixty-eight per cent of all were males.

The ages at which lymphoblastoma most frequently began were from 20 to 24, when most of the cases were of the Hodgkin type. The next ages when persons were most susceptible were from 35 to 39. At this time in life other forms of lymphoblastoma than Hodgkin's disease composed the majority of cases. Females tended to have the different forms later in life than males.

At all ages except at the age of puberty the number of males exceeded the females, and a relatively large percentage of women had the condition at or near the time of the menopause.

The duration of lymphoblastoma in the females was apt to be longer than in the males. It tended to be longer in men over 35 years old and in women under 25, than in younger males and older females, except when the latter were from 33 to 44 years of age.

Comparisons between the lengths of the course of disease in irradiated and nonirradiated patients do not indicate that such treatment significantly affects the duration of lymphoblastoma. It may do so in selected cases and yet can be blamed, in cases of short duration in the patients that were below the age of 24, for the greater incidence of those in which irradiation was given than those in which it was not.

The chances of lymphoblastoma lasting long were relatively great for those first irradiated when their disease was in an early stage. However, the duration of any such case can be paralleled by one given no special form of therapy.

Surgery probably can influence beneficially the duration of some cases of lymphoblastoma, particularly if it is employed early and thoroughly and is followed by irradiation.

The type of case usually treated early by surgery or by irradiation is apt to be the same as that destined by nature to last a long time.

The average duration of lymphoblastoma in the 401 deceased patients was 2.76 years, yet about 10 per cent of both the irradiated and nonirradiated had the disease for six or more years. A greater percentage of the seventy-six living patients have had lymphoblastoma this long duration of time. Although among them the frequency of surgical and early irradiation treatment is greater than for the deceased group, the treatment by modern methods will explain at the best but partially the increased percentage of cases of long duration.

Irradiation is undoubtedly of great value to patients with lymphoblastoma; it alleviates symptoms, decreases the size of lesions, and improves the patients' efficiency, in spite of the fact that it does not appear to influence importantly the duration of the disease.

OBSERVATIONS ON THE ETIOLOGY OF TUMORS

AS EVIDENCED BY EXPERIMENTS WITH A CHICKEN SARCOMA *

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In a series of papers published between 1911 and 1916, Rous [1] and his associates described a group of transplantable sarcomas of the chicken which could be transmitted from fowl to fowl by means of a cell free filtrate. The nature of these agents was not determined, but the natural deduction was that they belonged to the class of ultramicroscopic organisms. The main objection to this deduction was the high degree of specificity both in the animals affected and in the type of differentiation induced in the tissue. From these points it seemed more likely that the agents were closely associated with the mechanism controlling cell growth and differentiation than with an extraneous organism.

Recently, Gye [2] has reported experiments which he interprets as proving the presence of a living organism as the cause of malignant disease. According to him, this organism is active only in conjunction with a specific chemical factor which determines the animal species and tissue infected.

The basis for this theory is as follows: A piece of one of the chicken sarcomas mentioned above, when placed in a special culture medium and incubated in the absence of oxygen, in the course of a few days loses its power to produce a tumor. If, however, the clear supernatant fluid from such a "culture" is mixed with a fresh filtrate of the chicken tumor in which the tumor producing agent has been killed by chloroform, this mixture is now capable of inducing a typical malignant tumor of the chicken. Furthermore, similar "cultures" of rat, mouse and even human neoplasms in conjunction with the chloroform killed extract of the chicken sarcoma are equally potent in inducing a malignant change in the tissues of chickens. Gye reports that the organism of the chicken tumor may be subcultured through a number of generations and still be active when injected along with the so-called specific chemical factor. It is significant that these subcultures were made with the same type of medium employed for the initial "culture," but with the addition of a generous supply of embryonic tissue.

The fundamental nature of the problem involved has led us to examine the experimental proof on which this theory is based. The only source of the so-called chemical factor up to the present has been a filtrable chicken tumor. The supposed organism has been obtained from a variety of neoplasms, but in Gye's original publication no mention was made of control cultures of normal tissues.

The present report has to do with this point.

METHOD

Throughout the experiments we have attempted to follow in detail the methods used by Gye in his investigation.

Medium.—Hartley's broth was used as the base. To this was added 0.2 per cent potassium chloride and sufficient sugar to give a concentration of 0.7 per cent. The medium was tubed in 5 cc. amounts and sterilized. Then to each tube was added 1 cc. of fresh rabbit serum, and they were incubated for forty-eight hours to test the sterility.

Filtration.—The transmissible chicken tumor was the same one as that used by Gye in his experiments (chicken tumor 1). It was prepared in the usual way by grinding the fresh tissue with sand and adding about 50 cc. of Ringer's solution for each gram of tumor material used. The suspension was centrifugalized and the supernatant fluid filtered through a coarse Berkefeld filter (Gye used a sand and paper pulp filter).

The filtrate was placed in large test tubes in 10 cc. amounts, and to each was added from 0.15 to 0.2 cc. of chloroform, which was allowed to flow down the side of the tube so that a layer remained on top of the filtrate. In this condition the tubes were placed in a water bath at 36 C. for one-half hour, and then the filtrate and chloroform were thoroughly mixed and the tubes returned to the water bath for three hours. The amount of chloroform used was sufficient to insure a saturated solution with an excess, as shown by the fact that an appreciable amount was still present in the form of fine droplets in the bottom of the tube at the end of incubation. The chloroform was next boiled off in a vacuum at room temperature, and the fluid was ready for use.

EXPERIMENT 1.—A filtrate was prepared from a rapidly growing chicken tumor, and a portion of this was submitted to the chloroform treatment. An equal amount of the filtrate was added to the supernatant fluid of each of the following: eight day culture of chicken tumor 1; four day culture of chicken tumor 9,[1] and a four day culture of mouse placenta. Five cubic centimeters of each mixture was injected into the pectoral muscle of a Plymouth Rock hen. For control, 5 cc. of the chloroform treated filtrate was likewise injected into a hen. Thus the control received twice the amount of treated filtrate given to the test fowls. The activity of the untreated filtrate was likewise tested.

No tumor resulted from the injection of chloroformed filtrate alone, but rapidly growing typical sarcomas developed in the chickens receiving this filtrate mixed with the culture fluids of chicken tumor 1 and chicken tumor 9, and also with the culture fluid of mouse placenta. The latter tumor developed just as early and grew just as rapidly as did the other two.

EXPERIMENT 2.—The general technic of this experiment was the same as the foregoing. Of six chickens injected with 5 cc. of a mixture of equal parts of chloroformed filtrate of chicken tumor 1 and the supernatant fluid of a forty-eight hour culture of rat placenta, four developed typical tumors. Two of these progressed fairly rapidly, one grew slowly, and the fourth after a period of growth retrogressed following the removal of a piece for section. This last proved microscopically to be a typical sarcoma.

Of two chickens injected with 5 cc. of a mixture of equal parts of the chloroformed filtrate and the untreated filtrate of chicken tumor 9 (a nonfiltrable tumor), one developed a rapidly growing sarcoma of the type of chicken tumor 1.

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* From the Laboratories of the Rockefeller Institute for Medical Research.

1. Rous, Peyton: J. Exper. Med. **13**: 397, 1911. Rous, Peyton; Murphy, J. B., and Tytler, W. H.: A Filtrable Agent the Cause of a Second Chicken Tumor, an Osteochondrosarcoma, J. A. M. A. **59**: 1793 (Nov. 16) 1912. Rous, Peyton; and Murphy, J. B.: J. Exper. Med. **19**: 52, 1914.

2. Gye, W. E.: Lancet **2**: 109 (July 18) 1925.

Two chickens inoculated with 5 cc. of the chloroformed filtrate, twice the amount received by the test chicken, showed no evidence of tumor.

EXPERIMENT 3.—The general technic was again the same. Each of four chickens received 5 cc. of a mixture in equal parts of chloroformed filtrate of chicken tumor 1 and the supernatant fluid of a five day culture of chicken embryo. Three developed tumors, two rapidly progressive with extensive metastases at necropsy, and one slowly progressive, the hen being still alive.

Three chickens received 5 cc. of a mixture of chloroformed filtrate of chicken tumor 1 and the fluid from a five day culture of rat placenta. Of these, one developed a progressive tumor.

For controls, two fowls received 5 cc. of the chloroformed filtrate, again, twice the amount given the test fowls. They have remained free from tumors.

There are several additional experiments of the same nature, not yet completed, in which tumors have already developed from the treated filtrates mixed with fluid from cultures of embryo and placenta. In all cases the chloroformed filtrate alone has proved inactive.

In all experiments, the cultures were incubated under strict anaerobic conditions.

Placenta and embryonic tissue were selected for the control culture for the reason that they share with malignant tissue the ability to utilize sugar in their metabolism in the absence of oxygen.[3] This seemed important in view of the possibility that the substance activating the chloroform treated filtrate might be a product of metabolism.

COMMENT

Apparently the power to activate a chloroformed filtrate cannot be considered as proof of the action of a living organism, for cultures of embryonic tissue or placenta are just as potent in this respect as so-called cultures of malignant tissues.

Two possibilities present themselves in explanation of the results attained. First, that the causative agent of the chicken tumor is in the nature of an enzyme-like substance which is inactivated by chloroform and may be reactivated by a diffusible substance from malignant tumors, embryonic tissues and placental tissues. The second possibility is that the chloroform treatment does not destroy but simply attenuates the causative agent to a point at which unaided it is too weak to induce a tumor but in conjunction with some injurious or stimulating substance supplied by the "culture" it becomes effective. The fact that a great excess of chloroform so completely destroys the agent that no reactivation is possible is rather in favor of the latter possibility. Further experiments are in progress to elucidate these points.

SUMMARY

Anaerobic "cultures" of chick embryo and rat placenta have proved just as effective as so-called cultures of malignant tumors in activating chloroform treated filtrates of a chicken sarcoma. The necessity of assuming a cultivated living organism in the interpretation of Gye's results is eliminated.

3. Murphy, J. B., and Hawkins, J. A.: J. Gen. Physiol. 8: 115 (Sept.) 1925.

Qualifications of Public Health Nurse.—In order to undertake the multiplicity of duties that have been assigned to her, both in nursing and public health methods, a healthy body and human interest in her work, "tact, insight, a feeling heart, a quick mental grasp of persons and situations, dignity, persuasiveness—these things come by grace of nature."—Cumming, Hugh: *Pub. Health Rep.* **41**:380 (Feb. 26) 1926.

THE RELATION OF ANAPHYLAXIS TO IMMUNITY

STUDIED BY PASSIVE SENSITIZATION IN DOGS

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One of the debated questions in immunology is the relation of acquired hypersusceptibility to acquired immunity. Is hypersusceptibility an expression of an incompletely developed immunity, being possibly even a necessary integral part of the immunity mechanism? Or are the two processes wholly unrelated, independent expressions of toxic injury and bodily adaptation to foreign products?

Among serologists, the debate has narrowed down to a question of the identity or nonidentity of the specific precipitin and the so-called specific sensitizing antibody. Several observers have noted that the power of a rabbit antiserum to produce passive sensitization in guinea-pigs varies with its precipitin titer. Others have noted that in rabbits active sensitization is synchronous with the appearance of a certain definite amount of precipitin in the serum. Many serologists therefore believe that the sensitizing antibody and precipitin are identical, and that small amounts of precipitin give hypersusceptibility, larger amounts conferring immunity.

We have thought to throw light on this question by studying the relationship between the sensitizing antibody and the immune antibodies in the dog, an animal not yet used in such comparisons.

TECHNIC

To do this, one series of dogs was sensitized to horse serum by the routine method adopted in our laboratory.[1] A second series was immunized by from ten to twelve subcutaneous, intraperitoneal or intracardiac injections of 0.25 cc. of horse serum per kilogram of body weight, given at intervals of from four to six days. Transfusion tests were made from fourteen to twenty-one days after the final immunizing dose.

In dogs anaphylactic serums and immune serums usually gave approximately the same precipitin titer.

PASSIVE SENSITIZATION

Anaphylactic Donor.—If a normal dog is exsanguinated as completely as possible, and its blood volume restored by transfusion from an anaphylactic donor, the transfused dog becomes typically hypersensitive. Twenty-four hours later, on intravenous injection with 1 cc. of horse serum per kilogram of body weight, there is a typical fall in arterial blood pressure, typical contractions of smooth muscle structures, typical cyanotic engorgement of the abdominal viscera, and a complete loss of blood coagulability. Recovery is usually complete in from thirty to sixty minutes.

Immune Donor.—If in a similar way from 5 to 80 per cent of the total blood volume of a dog is replaced by transfusion from an immune donor, no suggestion of specific hypersusceptibility is conferred on the transfused animal. On a routine test, twenty-four

1. Manwaring, W. H.; Chileote, R. C., and Hosepian, V. M.: J. Immunol. 8: 233 (May) 1923.

hours later, there is no fall in arterial blood pressure, no engorgement of the abdominal viscera, and no reduction in blood coagulability.

This differs markedly from published results with rabbits and guinea-pigs, in both of which a passive transfer of from 10 to 25 per cent of the total serum volume from an immune donor renders the normal animal typically hypersensitive, in many cases sufficiently so to give fatal anaphylaxis.

CONCLUSION

In dogs, therefore, the difference between the sensitizing antibody and the immune antibody is not merely a quantitative one. The two antibodies apparently have wholly different physiologic properties.

PRACTICAL VALUE OF EXAMINATION FOR ENDAMEBA HISTOLYTICA BY CULTURE *

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The discovery of a successful method [1] for the cultivation of *Endameba histolytica* has given the medical profession a valuable aid in the management of amebic dysentery. The following exerpts from my experience may serve to exemplify the worth of the procedure.

1. Patient F. C., Walter Reed General Hospital, had had amebic infection for about ten years. Several years prior to his admission, a colostomy had been performed in a civil hospital for the purpose of treatment by irrigation. Motile amebas, containing red blood cells, were present in the stool and in the colostomy wound. Study of the movements and structure of the nucleus provided additional proof that the ameba was undoubtedly *E. histolytica*. Culture in this case was positive in twenty-four hours, and the ameba recovered was identical with that observed in direct examinations. By subculturing every forty-eight hours, this ameba has been carried in culture for the last four months.

2. Patient A. P. had had amebic infection. Physical examination and operation revealed a liver abscess, which was opened and drained. Many examinations of the feces had been made for amebas by the usual procedures, but none ever had been found. A culture of the feces, however, disclosed an ameba, typically *E. histolytica*. This ameba has been maintained in culture for the last three months.

3. In a survey of apparently healthy men, cultures of sixty-one stools were taken from as many individuals. Amebas corresponding in morphology to *E. histolytica* were recovered in six, an incidence of 9.8 per cent. Previous examinations by direct smear preparations were negative in five of the six instances. These amebas have been in culture for a period of two months.

4. In cultivation of a specimen received by mail, a stool, 48 hours old, contained a moderate number of cysts of *E. histolytica*. Motile amebas, *E. histolytica*, were recovered in culture at the end of twenty-four hours' incubation. The stool was placed in the icebox, and subcultures were taken after a lapse of eight days, when motile amebas were again recovered.

Theoretically, the multiplication of amebas in culture and their settling to the bottom by gravitation should give at one and the same time the equivalent of an examination of a large sample of feces by one of the methods of concentration. In practice, this is exactly what takes place. The practical value of this finding rests in the use of the cultural method for diagnosis in questionable cases, and in the control of treatment.

The simplicity of the preparation and use of the culture medium for amebas recommends it to any laboratory. It is prepared as follows: Four whole eggs are broken into a sterile receptacle. Fifty cubic centimeters of sterile Locke's solution [2] is added, and the whole emulsified. The emulsion is then distributed in about 10 cc. portions to suitable test tubes, inclined and heated to about 70 C. until solidified. They are then sterilized in the autoclave for twenty minutes at 15 pounds pressure. To this solid medium is now added the liquid component, so that a layer of the liquid covers a whole or part of the slant. The liquid component is sterile, inactivated human or horse serum diluted seven times its volume with sterile Locke's solution. The medium is inoculated by rubbing up against the wall of the tube a selected sample about the size of a pea. The medium should have been previously warmed to body temperature and sterility insured by incubating several days prior to its use. The culture is examined by taking a drop of fluid from the bottom of the tube with a capillary pipet.

The differential diagnosis of the amebas encountered in culture is beyond the scope of this note; however, after long study I have reached the conclusion that the movement and form taken in movements are sufficiently characteristic of the large strains of *E. histolytica* to aid materially in its identification. The rate of movement in culture, calculated from that of four active specimens, is 27.9 microns to the minute, or slightly less than 1½ inches a day. The form assumed while in motion is that spoken of as "band form"; that is, the long diameter is two or more times that of the transverse. So characteristic is the movement of *E. histolytica* that any entozoic ameba obtained from man in culture which is found to move actively across the field of the microscope should at once incite a strong suspicion that the ameba in question is *E. histolytica*.

The culture medium also contributes materially to the assets of the systematic student of the amebas of man and to the epidemiologist. To the investigator, a way is opened for more extensive research into the biology of the organisms than has been possible in the past. To the epidemiologist, an effective instrument is offered for the detection of carriers of *E. histolytica* and thus indirectly assistance in the control of the spread of the disease. It is probable that the application of the cultural method to surveys of the population will necessitate a revision upward of the incidence of amebas in man.

The field of the cultural method for the detection of amebas, therefore, is wide, and it is confidently expected that, through the use of this medium, a wealth of discoveries will be forthcoming in the very near future. Undoubtedly, this discovery of Boeck and Drbohlav marks another milestone in the history and conquest of amebic dysentery and is worthy of a place along the path blazed by Lösch, Koch and Kartulis, Schaudinn, Councilman and Lefleur, Craig, Vedder and Walker and Sellards.

* From the Department of Preventive Medicine and Clinical Pathology, the Army Medical School.

1. Boeck, W. C., and Drbohlav, Jaroslav: The Cultivation of Endamoeba Histolytica, Proc. Nat. Acad. Sc. **2**, No. 5 (May) 1925; Am J. Hyg. **5**: 371-407 (July) 1925.

2. Locke's solution consists of: distilled water, 1,000 cc.; sodium chloride, 9 Gm.; calcium chloride, 0.24 Gm.; potassium chloride, 0.42 Gm.; sodium bicarbonate, 0.2 Gm., and glucose, 1 Gm.

ERROR OF BASING SERUM DIAGNOSIS OF SYPHILIS ON THE KAHN REACTION ALONE *

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It is so well known and generally recognized that the Wassermann test may at times yield a falsely negative reaction in syphilis that it is not my purpose here to discuss the subject except to state that improvements in technic have reduced their occurrence to a minimum, this being especially true of the Kolmer complement-fixation test. But the question of falsely positive reactions has been discussed at even greater length, so that the impression generally prevails that the occurrence of falsely positive Wassermann reactions is even more common than falsely negative reactions. This is certainly not true of the Kolmer complement-fixation test, as experience has shown conclusively its specificity for syphilis, as indicated by the recent review of Kilduffe.[1] The Kolmer test has been used in this clinic for about four years, and in no instance can falsely positive reactions be said to have occurred. But the Kolmer test may occasionally yield a falsely negative reaction, as is true of all complement fixation tests for syphilis, although in my experience it is the most sensitive complement-fixation test evolved for the serum diagnosis of syphilis, which preserves intact the more important factor of specificity. It is to be understood, however, that these remarks are based on tests conducted by the quantitative method of Kolmer and not by modifications of his technic or the use of his new antigen in other methods. The only modification introduced by him since the method was published in 1922 is the routine removal of natural antisheep hemolysin, which has still further increased the sensitiveness of the reactions. Many, but not all, of the reactions reported on in this communication were conducted with this improvement in technic.

Just as there have been numerous modifications of the Wassermann test in the last twenty years, many different serum precipitation tests for syphilis have been proposed since Michaelis [2] discovered the phenomenon in 1907. During the last five years, interest has been greatly increased by Sachs, Georgi and Meinicke in Germany, Dryer and Ward in England, Vernes in France and Kahn in the United States. In this country, the Kahn test has commanded most attention; in a series of comparative tests in Kolmer's laboratory by Dr. Max Strumia,[3] it was found one of the most satisfactory. Since then, Kolmer has had the Kahn precipitation test conducted as a routine with all specimens submitted to his laboratory from the clinic of Dr. Schamberg and other services in the Polyclinic Hospital, believing that the serum diagnosis of syphilis was best served by conducting both tests with each serum.

TABLE 1.—*Observations in Fifty Cases of Treated and Untreated Syphilis Yielding Positive Kolmer and Negative Kahn Reactions*

Case	Diagnosis	Kolmer Reaction					Kahn Reaction			Treatment
		0.1	0.05	0.025	0.005					
C. R.	Tertiary syphilis	4	4	1	—	—	—	—	—	None
S. C.	Tabes dorsalis	4	4	4	—	—	—	—	—	None
A. C.	Latent syphilis	3	2	—	—	—	—	—	—	Over one year
G. D.	Latent syphilis	1	—	—	—	—	—	—	—	About six months
B. F.	Latent syphilis	1	—	—	—	—	—	—	—	Thirteen injections neo-arsphenamine
D. H.	Latent syphilis	1	—	—	—	—	—	—	—	None
J. S.	Taboparesis	4	4	4	—	—	—	—	—	Yes; amount unknown
E. D.	Latent syphilis	2	2	1	—	—	—	—	—	Five injections neo-arsphenamine
G. E.	Latent syphilis	2	3	—	—	—	—	—	—	Over five years
M. C.	Latent syphilis	4	4	4	—	—	—	—	—	About one year
E. C.	Gumma periosteum	2	2	1	—	—	—	—	—	None
E. L.	Latent syphilis	4	4	4	—	—	—	—	—	Several months
T. F.	Latent syphilis	4	4	4	—	—	—	—	—	Over three years
J. W.	Latent syphilis	3	—	—	—	—	—	—	—	Eleven months
D. H.	Congenital syphilis	3	2	—	—	—	—	—	—	Two years
H. B.	Latent syphilis	1	—	—	—	—	—	—	—	Over four years
F. M.	Congenital syphilis	2	1	—	—	—	—	—	—	None
E. T.	Latent syphilis	4	4	4	—	—	—	—	—	None for two years
L. B.	Latent syphilis	1	—	—	—	—	—	—	—	None
E. B.	Tabes dorsalis	3	2	1	—	—	—	—	—	None
M. B.	Latent syphilis	2	—	—	—	—	—	—	—	None
L. M.	Latent syphilis	2	1	—	—	—	—	—	—	Treatment four years ago
S. P.	Latent syphilis	1	—	—	—	—	—	—	—	Treatment several years ago
E. S.	Congenital syphilis	2	1	—	—	—	—	—	—	None
T. W.	Congenital syphilis	2	—	—	—	—	—	—	—	None
J. K.	Congenital syphilis	2	—	—	—	—	—	—	—	None
G. L.	Latent syphilis	4	4	4	—	—	—	—	—	Several years ago
P. D.	Tabes dorsalis	2	1	—	—	—	—	—	—	None
J. S.	Latent syphilis	1	—	—	—	—	—	—	—	Amount unknown
J. H.	Latent syphilis	4	4	2	—	—	—	—	—	None
R. W.	Latent syphilis	2	1	—	—	—	—	—	—	None
R. N.	Congenital syphilis	1	—	—	—	—	—	—	—	None
S. A.	Latent syphilis	2	1	—	—	—	—	—	—	None
S. C.	Latent syphilis	3	2	—	—	—	—	—	—	For about seven years
E. P.	Tabes dorsalis	3	3	3	1	—	—	—	—	Two years
J. F.	Congenital syphilis	4	4	3	—	—	—	—	—	Three years
N. L.	Early tabes	2	2	1	—	—	—	—	—	Three years
M. B.	Tabes dorsalis	3	2	2	1	—	—	—	—	At intervals
A. C.	Tertiary syphilis	2	1	—	—	—	—	—	—	Few months
A. T.	Tertiary (visceral)	2	—	—	—	—	—	—	—	Several months
H. J.	Latent syphilis; negative history	1	—	—	—	—	—	—	—	None
J. K.	Tertiary (visceral)	4	4	3	—	—	—	—	—	None
C. L.	Latent syphilis	1	—	—	—	—	—	—	—	About one year
W. C.	Tertiary ulcerating gumma	1	—	—	—	—	—	—	—	About one year ago
A. M.	Late secondary	3	—	—	—	—	—	—	—	None
S. L.	Congenital syphilis	4	2	1	—	—	—	—	—	Few months
B. B.	Congenital syphilis	3	2	—	—	—	—	—	—	Few months
G. H.	Latent syphilis	2	—	—	—	—	—	—	—	None
J. B.	Optic atrophy	2	2	1	—	—	—	—	—	About three years ago
C. T.	Latent syphilis	3	1	—	—	—	—	—	—	Two years

* From the clinic of dermatology-syphilology of Dr. Jay F. Schamberg, Polyclinic Hospital, Graduate School of Medicine of the University of Pennsylvania.

1. Kilduffe, R. A.: Kolmer Modifications of Wassermann Reactions, Arch. Dermat. & Syph. **6**: 709 (Dec.) 1922.

2. Michaelis: Berl. klin. Wchnschr. **44**: 1477, 1907.

3. Strumia, M. M.: Study of Serum Flocculation Reactions in Syphilis, Arch. Dermat. & Syph. **8**: 50 (July) 1922.

This is based on the observation that, with about 4 per cent of serums, the Kolmer reaction may be positive when the Kahn is negative or the Kolmer negative when the Kahn is positive. A number of instances of this kind have already been reported by Kelly [4] from Schamberg's clinic and Kolmer's laboratory; but since then numerous additional and similar reactions have been observed, which it is my special purpose to discuss in this paper, in order to express a note of warning against the use of the Kahn or any other precipitation test alone in the serum diagnosis of syphilis or as a serologic guide in treatment. My purpose, however, is likewise to state that the same is true of the Kolmer or any other complement-fixation test and to express the opinion that the serum diagnosis of syphilis is best served by using both tests as a routine as has been Kolmer's practice during the past year.

I have previously expressed the opinion that the Kolmer complement-fixation reaction has been found specific for syphilis in our experience, and the Kahn test has likewise shown a high degree of specificity, although weakly positive reactions are occasionally reported with the serums of individuals regarded clinically as nonsyphilitic. This is especially true when the reactions are read after the serums stand over night in a refrigerator, and I advise that reactions of this kind be regarded with some reservation in the absence of a history or clinical evidences of syphilis.

In table 1, I have briefly summarized cases regarded as syphilitic in Schamberg's clinic yielding positive Kolmer and negative Kahn reactions. In table 2 are shown an equal number in which the Kolmer reaction was reported negative and the Kahn positive. They have been listed as observed and without selection as reported to the clinic during the past year, and constitute about 3 to 4 per cent of discrepancies between the two tests. In other words, both tests agreed as far as positive or negative were concerned in from 96 to 97 per cent of the cases; but the fact that, in any particular case, either one of the tests may yield a falsely negative reaction constitutes, in my opinion, an important practical reason for conducting the serum diagnosis of syphilis by both instead of by either one alone.

Instances of discrepancies of this kind occurred in all clinical types of syphilis, although in my experience the larger number are instances of negative Kolmer and positive Kahn reactions in treated cases of syphilis. When treatment is guided by the Kolmer reaction, far more is required to produce a state of negativity than with the original Wassermann test or most of its modifications; but not infrequently the Kahn test continues to yield positive reactions even after the Kolmer reactions are negative. Whether this indicates continued infection with *Spirochaeta pallida* or merely the longer persistence of antibody in the blood cannot be stated at present, although in a number of such instances spinal fluid studies still showed a positive Kolmer reaction.

Of course it is frequently observed that the two reactions vary in the degree of positiveness, but it is impossible to compare them accurately on this basis, because they vary so greatly in technic and the immunologic principles involved. Nor is this a matter of much clinical

TABLE 2.—*Observations in Fifty Cases of Treated and Untreated Syphilis Yielding Negative Kolmer and Positive Kahn Reactions*

Case	Diagnosis	Kolmer Reaction					Kahn Reaction			Treatment
P. F.	Latent syphilis	—	—	—	—	—	—	2	3	Four years ago
D. F.	Congenital syphilis	—	—	—	—	—	—	1	1	None
J. D.	Latent syphilis	—	—	—	—	—	—	1	1	One year
G. M.	Latent syphilis	—	—	—	—	—	—	1	1	Two years
A. M.	Latent syphilis	—	—	—	—	—	2	3	4	Two years
C. W.	Latent syphilis	—	—	—	—	—	—	2	3	None
M. M.	Latent syphilis	—	—	—	—	—	—	1	1	Considerable
R. S.	Latent syphilis	—	—	—	—	—	—	1	1	Five years
A. R.	Latent syphilis	—	—	—	—	—	1	3	4	Amount unknown
U. S.	Latent syphilis; history negative	—	—	—	—	—	1	2	3	None
W. H.	Latent syphilis	—	—	—	—	—	3	4	4	Five years
L. J.	Latent syphilis; doubtful	—	—	—	—	—	—	1	1	Provocative only
M. J.	Latent syphilis; history negative	—	—	—	—	—	1	2	4	Over one year
E. H.	Syphilis condylomas	—	—	—	—	—	—	1	1	Three years
J. M.	Visceral syphilis (?); history negative	—	—	—	—	—	—	1	1	None
B. B.	Congenital syphilis	—	—	—	—	—	—	1	1	Two years
H. B.	Latent syphilis	—	—	—	—	—	—	1	1	Four years
R. C.	Latent syphilis	—	—	—	—	—	—	1	2	Mercury twenty-two years ago
A. G.	Syphilitic iritis	—	—	—	—	—	—	1	2	About two months
C. C.	Syphilitic leg ulcer	—	—	—	—	—	2	3	3	About two months
A. D.	Secondary syphilis (?)	—	—	—	—	—	1	4	4	None
D. J.	Latent syphilis	—	—	—	—	—	1	2	2	About two months
M. H.	Latent syphilis; history negative	—	—	—	—	—	—	1	2	None
F. S.	Tabes dorsalis	—	—	—	—	—	—	1	2	None
R. S.	Latent syphilis	—	—	—	—	—	2	3	3	One year
J. W.	Latent syphilis	—	—	—	—	—	—	1	2	About two years
E. P.	Latent syphilis; history negative	—	—	—	—	—	—	1	1	None
C. H.	Latent syphilis	—	—	—	—	—	2	3	4	About one year
C. B.	Congenital syphilis	—	—	—	—	—	—	2	3	None
N. B.	Latent syphilis	—	—	—	—	—	2	4	4	Six months
B. E.	Secondary syphilis	—	—	—	—	—	—	1	2	None
W. F.	Tertiary syphilis	—	—	—	—	—	—	2	3	None
T. W.	Congenital syphilis	—	—	—	—	—	—	1	1	Two and one-half years
R. W.	Congenital syphilis	—	—	—	—	—	—	1	2	Two and one-half years
H. D.	Latent syphilis	—	—	—	—	—	—	1	2	None
M. F.	Latent syphilis	—	—	—	—	—	2	3	4	Three years
L. L.	Latent syphilis	—	—	—	—	—	—	1	1	Amount unknown
H. M.	Latent syphilis	—	—	—	—	—	—	1	1	Five years
E. M.	Cerebrospinal syphilis	—	—	—	—	—	—	1	1	One year
H. B.	Tabes dorsalis	—	—	—	—	—	2	2	3	Six years
A. B.	Latent syphilis	—	—	—	—	—	—	1	1	Five years
L. M.	Syphilitic keratitis	—	—	—	—	—	2	3	3	None
J. H.	Latent syphilis	—	—	—	—	—	—	1	1	Several years
A. R.	Congenital syphilis	—	—	—	—	—	—	1	2	None
N. L.	Neurosyphilis	—	—	—	—	—	2	3	4	Four years
M. B.	Congenital syphilis	—	—	—	—	—	2	3	3	Three years
E. W.	Latent syphilis	—	—	—	—	—	—	1	2	Amount unknown
M. D.	Latent syphilis	—	—	—	—	—	—	1	2	Amount unknown
R. S.	Latent syphilis	—	—	—	—	—	1	2	2	Three years
G. G.	Visceral syphilis	—	—	—	—	—	2	2	2	None

4. Kelly, R. L.: Clinical Study of Kahn Precipitation Test and Kolmer Complement-Fixation Test, Arch. Dermat. & Syph. **12**: 720 (Nov.) 1925.

importance; and it is of infinitely less importance than the question of a true and specific positive or negative reaction regardless of the degree of positiveness.

I hope, however, that the instances listed in the tables will serve to indicate the mistake of using the Kahn test alone for the serum diagnosis of syphilis. I believe it is particularly necessary to publish data of this kind at present, in view of the fact that some may be induced to use the Kahn or other precipitation test alone in the serum diagnosis of syphilis. It is true that under acceptable conditions the two tests agree so far as positive or negative reactions are concerned, but in the best interests of the serum diagnosis of syphilis both the Kolmer and the Kahn tests should be employed.

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MODIFICATION OF PRESENT METHODS OF GASTRODUODENOSTOMY *

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The increasing interest in pyloric resection and its growing importance as a method of treating ulcerations of the stomach and duodenum are matters of common knowledge. Furthermore, there is the mounting conviction that in suitable cases some form of pyloroplasty or gastroduodenostomy is the operation of choice. Unfortunately, until quite recently the choice of operations of this type was comparatively small. The Billroth I operation, the Finney pyloroplasty and the physiologic pyloroplasty of Horsley for many years offered the only satisfactory surgical means of restoring the normal physiologic relations of the stomach after resection of an ulcer at the pylorus or in the duodenum. The Billroth I operation fell into a rather undeserved disrepute, and in the latter two operations ordinarily half the pyloric ring remained intact, which may possibly be a disadvantage, for certain it is that there is a marked delay in emptying in many cases following pyloroplasty.

In 1923, Finney [1] reported an operation for gastroduodenostomy independently of von Haberer,[2] whose paper had appeared the previous year (fig. 1 *a*). In this operation the end of the stomach was sutured to the side of the dodenum after the end of the duodenum had been inverted. This operation marks a distinct advance in surgery at the pylorus and of course adds to the available methods. Horsley [3] reports an interesting modification of the Billroth I operation, which he has practiced with satisfaction for some time. This procedure involved splitting the duodenum in the long axis for a short distance and flaring out the end to avoid occlusion of the lumen by the circular sutures of the original operation (fig. 1 *b*).

The method here described is offered only as a modification of the Finney-Haberer operation and in no sense as a new procedure.[4] Inversion of the duodenal stump is always a source of some concern, and inversion with subsequent reopening, as in the Finney-Haberer operation, does not seem necessary in all cases. This inversion uses up at least 2.5 cm. of the available duodenal length, and where mobilization is so important—a fact repeatedly emphasized by Finney—

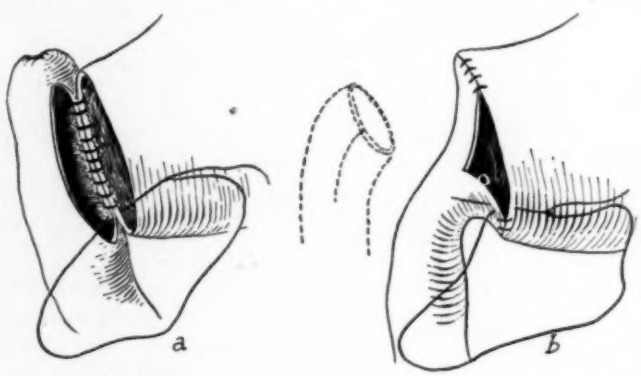

Fig. 1.—*a*, Finney gastroduodenostomy, showing inverted end of duodenum impinging on new stoma; *b*, Horsley's modification of Billroth I operation.

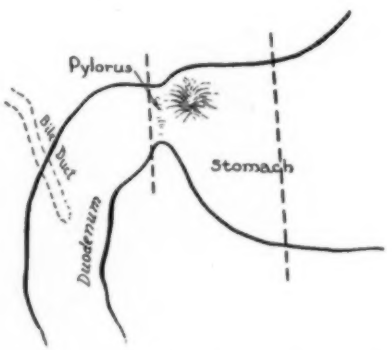

Fig. 2.—Ulcer on gastric side of pylorus and area to be resected.

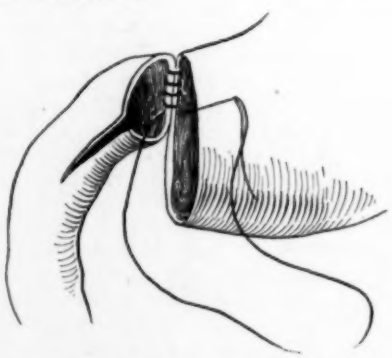

Fig. 3.—Beginning suture of duodenum to posterior wall of stomach at lesser curvature and longitudinal incision started.

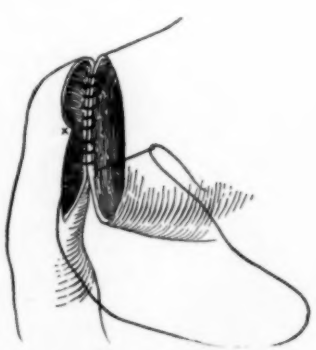

Fig. 4.—Posterior row almost completed; *x*, small tab of duodenum, which is trimmed off before suturing.

Fig. 5.—Anterior wall being closed: general relations and appearance at end of operation.

* From the Surgical Department of the Johns Hopkins University Medical Department.

1. Finney, J. M. T.: Tr. South. S. A. **36**: 576, 1923.
2. Von Haberer, H.: Deutsche Ztschr. f. Chir. **172**: 1-77, 1922.
3. Horsley, J. S.: Surgery of Stomach and Small Intestine, Surgical Monographs, New York, D. Appleton & Co., 1926, pp. 222.
4. Babcock reports splitting the inner side of the duodenum with combined end-to-end and side-to-side anastomosis of duodenum to stomach, and gives a diagram (Am. J. Obst. & Gynec. **9**: 473 [April] 1925).

this distance can sometimes ill be spared. In addition, the inverted duodenal stump may become edematous and partially obstruct the available lumen—this fact has been noticed frequently in dogs. It seemed advisable, therefore, to preserve the entire length of available duodenum for suture, and figures 2, 3, 4 and 5 illustrate the method evolved. This procedure was carried out repeatedly on animals two years ago. Starting at the lesser curvature, the end of the duodenum is sutured to the stomach by any method the operator may prefer. When half of the circumference has been used in this way the duodenum is split in its long axis about 1 cm. from its attachment, for a distance sufficient to make the opening correspond exactly to that of the stomach. The small angular tab shown in figure 4 is trimmed off. The posterior suture being completed, the anterior wall is closed in the usual manner. The blood supply is not interfered with in any way and is entirely adequate.

Opportunity has presented itself to use this method in only one clinical case, but the patient's postoperative course was so perfectly smooth that a brief report seemed justified. At operation the patient presented a perforating ulcer on the lesser curvature about 2 cm. from the pylorus. The duodenum could be mobilized readily. The pylorus and pyloric antrum were resected and the technic described above was carried out with a minimum of difficulty.

Fig. 6.—Rapid emptying one week after operation in case treated by modified gastroduodenostomy.

The patient's postoperative course was quite uneventful. There was no vomiting, no elevation of temperature, and no evidence whatever of retention. A roentgen-ray examination one week after operation showed a perfectly normal emptying time—less than five hours. Figure 6 shows the result of this immediate examination. Gastric analysis done at the same time showed a marked reduction in free acid and practically no regurgitation of bile.

Figure 7 shows the result in a patient on whom a Finney-Haberer operation had been performed. The emptying time here too was normal.

CONCLUSION

The modification of the Finney-Haberer gastroduodenostomy here described offers further choice of procedures for restoring the normal physiologic relations of the stomach after operations that have involved resection of the pylorus.

Fig. 7.—Examination made two weeks after operation in case treated by Finney-Haberer gastroduodenostomy.

Disease as Regarded by Ancients.—If we look back to ancient medicine we find everywhere the same essential picture, disease regarded as the work of demons or of magic, and a corresponding treatment by the aid of incantations, charms, and exorcisms. Side by side with these demonological conceptions and therapies, however, there existed a certain number of simple surgical practices, and a herbal lore in which, among masses of extraordinary and revolting ingredients, one finds the names of drugs of undoubted efficacy, and value. The Ebers papyrus (1550 B. C.) for example, describes the incantations used in Egyptian medicine, but it also contains a list of remedies including such familiar drugs as opium, hyoscyamus, squills and castor oil. The records of Babylonian medicine show a similar demonological view of the causation of disease, and detail the litanies and incantations necessary for its treatment. Diagnosis is closely connected with astrology, and is made by the interpretation of omens. "In the Old Testament disease is an expression of the wrath of God, to be removed by moral reform, prayers and sacrifice." Yet in both these cases there is ample evidence of the use of simple surgical, herbal and hygienic measures, apparently without relation to the supernatural conceptions applied to disease in general. It is, perhaps, legitimate to assume that the former originally developed on a basis of empirical observation essentially identical with that on which the structure was ultimately to be erected.—Hart, Bernard: *Lancet* **1**:586 (March 20) 1926.

A COMPARATIVE METHOD FOR DEMONSTRATION OF NORMAL DEVELOPMENT IN INFANCY

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NEW HAVEN, CONN.

Is it desirable for medical students to become more systematically familiar with the normal? In connection with the general course in pediatrics, given at the Yale University School of Medicine, I recently had opportunity to test the feasibility of demonstrating to junior students the developmental characteristics of normal infants. The present paper is a stenographic report of one session devoted to the clinical demonstration of two pairs of normal infants, respectively 4 and 6 months, and 6 and 9 months of age.

This session was followed by a clinical demonstration of mental deficiency in infant subjects. It was our purpose, in the comparative examinations, to clarify the nature of developmental retardation by a preliminary presentation of normal characteristics; and also to illustrate the principles of developmental diagnosis.

From the standpoint of developmental diagnosis we are primarily interested in all those forms of behavior, mediated by a nervous system, which are coherently related to the attained maturity of that nervous system. We may conceive such behavior as being a functional index of developmental status. An infant is as old as his behavior.

In this sense the mind becomes an observable object within the scope of developmental diagnosis.

For several years we have been attempting at the Yale Psycho-Clinic to determine behavior norms of infancy, and to define diagnostic procedures which might enable us to make objective estimates of developmental status in early life.[1]

A few of these procedures are illustrated in the comparative examinations described below. The conditions of the examination were simple. Two ordinary, normal infants were brought into the pit of the clinical amphitheater by their mothers. The mothers seated themselves side by side at two small tables, the babies in their laps. The spontaneous behavior of the babies was noted and compared.

While the infants were thus seated facing the student group, psychologic test material was served to them in duplicate. One clinical assistant was assigned to each child, and the test situations were presented simultaneously, in order to bring the behavior reactions of the children into immediate, comparative relief.

The convincingness of the demonstration depended, of course, on the actual behavior of the children, which is only imperfectly suggested by the accompanying illustrations. The comparative situations and the comments made on them were substantially as follows:

NORMAL BEHAVIOR AT FOUR AND SIX MONTHS

The purpose of this demonstration is to show the importance of the comparative method in developmental diagnosis.

A law of contrast apparently controls clinical perception and clinical judgment. It is difficult either to see or to evaluate symptoms of development as isolated phenomena. They take on definition and meaning only when seen in terms of a higher or lower level of development; that is, in comparative terms.

Systematic comparison is a fundamental scientific procedure. It is of especial value in the elusive field of development. We cannot measure development with mathematical precision, but we may descriptively formulate successive levels of development and we may bring these levels into diagnostic comparison. We may do this whether we are concerned with normal or subnormal manifestations.

Naturally, our basis of reference is the normal or median child. Our true norms or standards must be sought in a study of the normal. Next week it will be time to see mentally retarded subjects. Today we shall observe infants who are making normal progress on their developmental journey but who have not covered the same distance. One is two months "ahead" of the other. If you will compare their behavior you will see a discrepancy. That discrepancy is a measure of the difference in their developmental status. Developmental diagnosis deals with just such comparative differences.

Ordinarily the physician diagnoses one individual at a time. Now, however, two are being scrutinized. One is estimated or measured by means of the other.

You see at once the usefulness of the comparative method of approach because without your willing it, I think, your perception is sharpened by the fact that you can bring two infants into simultaneous comparison. You observe a certain control and poise in the senior infant (aged 6 months) compared with the perfectly normal, but wobbling equilibrium of his junior (aged 4 months). This confers a certain aspect of sedateness and poise on the older child which is a valid clinical impression. This more advanced motor control is a behavior difference, correlated, of course, with the greater maturity of the nervous system of the older child.

[Each baby is lifted in turn. And then they are placed side by side on the tables, to show the difference in sitting posture.]

If I hold these babies and just lift them in order to get the tension feel, I detect a difference that is motor in character, as the result of a greater tonicity and reactiveness in the postural control of the older child, who is in fact much farther along in the mastery of the sedentary posture, in which students are quite skilled. This baby, if he is carefully placed, will momentarily maintain a sitting posture. This is scarcely possible with the 4 months old child, and it will be noticed that nature has therefore conferred a little more solicitude on the part of the mother of the 4 months old child, who is a little less ready to release her protective hold. Naturally so, because the baby is not quite so independent as yet. There is a certain nicety in this adjustment of relation between the mother and child which asserts itself all along the growing period, in conformity with the increasing independence of the child as he matures.

[The examiner demonstrates a difference in the rigidity of head posture by placing the baby's head between the palms and gently exerting pressure to right and left, and then forward and backward.]

Now there is another item worthy of inspection under certain diagnostic conditions comparable to the one just referred to; namely, the resistance of the head to lateral pressure and to pressure backward and forward. We have no precise objective measure of this resistance.

1. The norms of development and their diagnostic applications are described by Gesell, Arnold: The Mental Growth of the Preschool Child: A Psychological Outline of Normal Development, Including a System of Developmental Diagnosis, New York, The Macmillan Company, 1925.

However, you see that there is a difference in the fixity and rigidity of the head control in the case of the two children at this level of development; and since the lack of attainment of postural control of the head is an important symptom of mental retardation in early infancy, this item of observation is well worth considering.

[The babies are placed in the dorsal position, and the spontaneous movements are noted. The babies are then placed in the prone position to show the difference in postural response.]

Fig. 1.—Normal children, aged 4 and 6 months, side by side for comparison: Tests were simultaneously made to bring out comparative differences in behavior and developmental status.

It will be noted that these babies do not disport themselves in just the same manner while they lie here, in the dorsal position. There are significant differences in the scope and character of the movements of both arms and legs.

The prone position is worth testing in children about whose developmental status one has any doubt, and it will be noticed that at 4 months there is already considerable capacity in the erection of the head. The 6 months child is still farther along; his shoulders are above the table, and one can see the beginning of the creeping posture.

[Each clinical assistant takes a small red ring (4 inches in diameter), suspended from a string, and dangles it before the infant, within easy reach.]

Now something very significant may be witnessed. At 6 months one sees characteristic direct reaching. At 4 months, when the ring is dangled, there is a cruder closing-in reaction in which the coordination is much less under visual control. The directness, the accuracy and the promptness of response are less. This child at 4 months is really somewhat advanced beyond the average level in this reaction. He is just at the brink of reaching, and if by happy chance or by casual contact he touches the ring, the reaction is one which simulates reaching, but which is not true reaching. The difference in the perfection between these two responses is very significant from a normative point of view.

[Each infant is now held in a sitting position and brought slowly toward the table until his hands are within favorable range of the edge of the table, or just touch the table surface.]

Perhaps you are waiting for me to perform a test. Well, this is the test. The question is, How do these two babies react to the table surface? A marked behavior difference may be noticed here. The 6 months old child is aggressive. He playfully exploits the table surface and the table edge. The hands of the 4 months old child are rather idle in this situation. You may say he is inhibited by your presence. I think not. I think his failure to exploit the table is due to his immaturity. His neuromuscular mechanism has not advanced to that stage which is characteristic of the 6 months old child, and therefore he gives only casual heed to the table surface. If his hands touch the table they are likely to linger there, which itself has some significance. He may sometimes perform in a way that simulates a patting motion, but his present restricted reactiveness is the characteristic behavior observed under the more normal conditions of the examining room.

[The infants are still seated in their mothers' laps, facing the table. A spoon is placed before each infant. The attention of the infants to the spoon is noted. The spoon is then shifted to the edge of the table, and each examiner brushes it from the table, so that the spoon falls to the floor. The reaction of the infants to the disappearance of the spoon is likewise noted.]

Now we are going to test the perceptual reactions of our subjects—the perceptual capacity. You are certain that the 6 months old baby sees that spoon and he is making a reaching response toward it. We also have definite evidence of regard for the spoon on the part of the 4 months old child. We see the regard expressed in the fixation of facial and ocular muscles; but it is a rather transient regard, certainly not the prolonged attention which this 6 months youngster is showing.

We are still dealing with neuromuscular mechanisms, because the whole perceptual process is a motor process as well as a sensory one, and we are also dealing with symptoms of mental adaptation. We have before us an objective difference—a clinical cleavage with respect to attention, when the mental adjustment of the younger infant is compared with that of his more mature senior. Now, it is clinical cleavages like this that we are interested in. We are trying to formulate behavior differences in such a way that they will enable us to record descriptively and analytically developmental status, and thus take the problem of mental growth somewhat out of its present state of elusiveness.

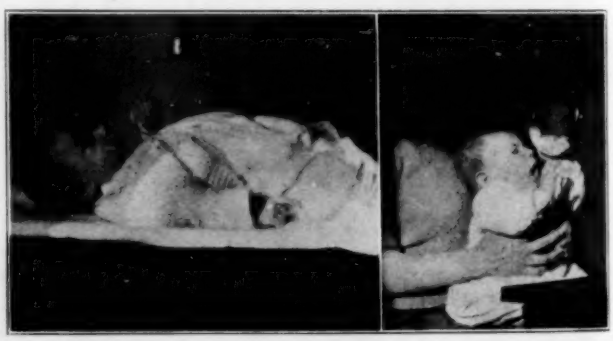

Fig. 2.—The 4 months old infant lies down and looks at a stimulating object; the one 6 months old sits up (with support) and reaches for the object.

Now please note the difference in behavior, when the spoon suddenly falls to the floor. The 6 months old baby is transiently aware of the disappearance of the spoon; gives heed, so far as we can infer, to its disappearance. The 4 months old baby may also "miss" the spoon, but in a different manner. Neither child pursues a quest for the vanished object.

We must reckon here in some way with the mechanism of attention, because attention has to do with fixation, and surely it has to do with this fundamental quality of projection, or of prolongation of interest which we often call concentration. When we bring in our 9 months old infant we shall doubtless see a projection of interest which can well be considered as a kind of inquisitiveness into the fate of the dropped spoon.

[One by one, several small disks of diminishing size are placed on the table before each child. The first disk is a large

Fig. 3.—Prehension: The 6 months old infant scoops up a small pellet with his palm; the 9 months old infant picks it up with forefinger and thumb.

wooden button, 4 cm. in diameter; the last in the series is a small pellet, 0.5 cm. in diameter.]

We come back to the question of perceptual reactions and present a series of disks, graduated in size. This simple test indicates that the size of the stimulus and the age factor influence the perceptual response.

The visual fixation of the 4 months old child is elicited by the larger buttons. A reaching response, as well as visual regard, is aroused in the 6 months old child. The 4 months old child does not pick up any button. The 6 months old child picks up the larger buttons with ease, but as we approach the smaller sizes we get into his difficult zones. The typical 9 months old infant can pick up this smallest pellet with fairly adept prehension. At 6 months we get characteristically a visual regard for the pellet, and not infrequently a palmar scoop reaction which results in a raking in of the pellet. But we are never very much alarmed or surprised if, under favorable conditions, he fails to make a manual approach on this tiny pellet.

[A piece of paper, 8 by 10 inches, is presented to the 4 months old child and pressed into his hands. A similar piece of paper is presented to the 6 months old child. The difference in the playful activity of the babies with the paper is noted.]

The 4 months old child does not reach for the paper even when it is very favorably presented. That is, he does not actively reach for it. At 5 months we have observed that paper favorably placed in this manner will be attained by the child. The 6 months old infant seizes it directly. The 4 months old infant, however, will grasp the paper if it is pressed into his hand. Both children "play" with the paper. But the degree and the quality of manual exploitation of the paper are distinctly superior in the 6 months old infant.

Taken by itself, this observation is not of much importance; but, comparatively interpreted, it is an objective item that may contribute to our diagnostic estimate. The 4 months old infant is apparently below the level of the 6 months old infant both in play interest and in play capacity.

Does your baby play with toys? we ask the mother of the younger child, and she answers, No. Does he play with his hands? Yes. He has just begun to hold them up for playful inspection. In this way he is perfecting the neuron connections which bring eye and hand into coordination for the reaching-on-sight, which becomes so prominent in the behavior picture at the age of 6 months.

We question the mother of the 6 months old child and find that he plays with toys—a rattle and a rubber doll. He has not, however, acquired any domestic tricks, such as waving bye bye. These acquisitions, as symptoms of normal development, come somewhat later, as we shall see. We must not expect too much; but we may say that, from the standpoint of norms or standards, the average 6 months old babe is competent to play with a rattle. Even one such item may have a normative value in constructing an estimate of developmental status.

Summing up, we may say that the behavior of both these babies rates up to the expected level. In actual performance and in the quality of their reactions, both subjects are normal. It has been our purpose to give a clear-cut comparative view of the normal behavior characteristic of two closely adjacent age levels. Only two months separate these children chronologically. If, however, this 6 months old baby today, under our tests, had behaved consistently like our 4 months old baby, we should have to infer a grave degree of retardation. Constitutional retardation expresses itself early. The time clock is an important factor in determining normality of development. Attained development is a true index of prospective development. Within judicious limits, even infants must measure up to certain standards.

NORMAL BEHAVIOR AT SIX AND NINE MONTHS

[A 6 months and a 9 months old infant are next brought in, and observed in the same comparative manner as the

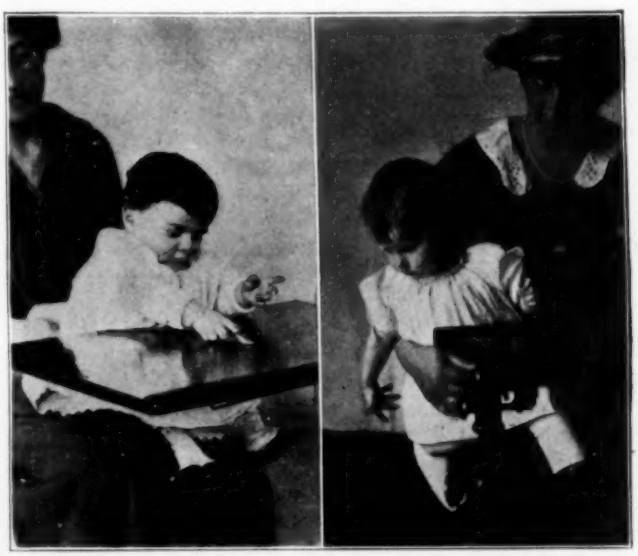

Fig. 4.—Memory and attention: The 6 months old infant shows a transient awareness of the disappearance of a spoon, when it is dropped on the floor; the 9 months old infant shows a definite follow-up interest.

previous pair. Their postural control and their spontaneous reactions to the new situation are first noted.]

The ages of these infants are, respectively, 6 months and 9 months. We might have used the same 6 months old subject as before for this comparison, but it is just

as well to have another representative. We may be pretty sure that his behavior will approximate that of his predecessor.

Three months makes a difference. It will be noted by the behavior of the 9 months old infant as he is brought into the room that we shall have to be duly considerate of his emotions. We are dealing with a more highly socialized individual. By several tokens he has already shown that his social maturity, his personality, is on a perceptibly higher level. The 6 months old child is sensitive to persons, but not to the same degree or to the same extent as the 9 months old child.

Postural control is definitely more advanced in the older child. The mother is holding him much less securely. In fact, he is maintaining a sort of independent position in the lap. His head control is more advanced. This may be noticed when he turns his head, as he frequently does toward his mother, as though seeking assurance. But he is becoming rapidly adjusted to his new situation.

When placed on the table, the 6 months old child cannot sit without support. The 9 months old child can.

On the first comparative examination, it was the 6 months old child who seemed posturally steady, but now the situation has altered. It is the six months old child who seems to lack equilibrium by contrast with the 9 months old. This suggests the significance of comparative and normative procedures in developmental diagnosis.

[The children are seated in their mothers' laps at the tables. A spoon is proffered to each one simultaneously to elicit the reaching and prehension responses. The spontaneous play with the spoon is noted. The spoon is then withdrawn from the child's hands, is placed near the edge of the table and suddenly brushed from the table onto the floor, to determine whether there is any follow-up interest on the part of either child.]

A definite difference will be observed in the reaching response. The 9 months old infant reaches with more directness, particularly overhead. His reaching is also more unilateral in character; right handed differentiation is asserting itself. When the spoon is placed on the table, he picks it up with perceptibly greater skill. He exploits it more elaborately in play, and resists withdrawal of the spoon. He is audibly expressing his "impatience" or his desire to play some more with the spoon. He was quietly content a few minutes ago; but having been keyed up to playing, he wishes to continue. A kind of circular reaction is at work.

We promised you a comparison with the 9 months old infant in the fallen spoon situation. Here you have it. The 6 months old infant betrays merely a dim, fleeting awareness of the sudden disappearance; the 9 months old child shows a follow-up interest by promptly looking down on the floor in quest for the spoon.

[A small pellet (0.5 cm. in diameter) is placed before each infant, to note the character of the prehension.]

This simple but rather interesting test clearly reveals the advance which has been made in the prehensory apparatus; that is, in the concealed part of the apparatus; namely, its neuronic organization. In the 6 months old infant there is still a rather crude scooping reaction by simultaneous flexion of the digits and cupping of the palm. In the 9 months old infant there is a more precise pincer-like prehension, bringing the forefinger and thumb into opposition on the pellet.

[A small wood cube is offered to each infant as before; then a second, and a third.]

You observe that the 9 months old infant holds two cubes with more readiness than his junior partner. He also shows more interest in a third proffered cube. Sometimes the 9 months old child will acquire the third cube, by dropping one in hand, or holding two in one hand, or by a prehensile reach with his mouth. This means, of course, that the scope of attention is widening. In another year this child will take and retain almost as many of these cubes as you can offer him.

[The table is cleared. One of the small cubical blocks, an enamel cup, and later a piece of paper are presented to each infant to elicit spontaneous play behavior.]

You note that the 9 months old child makes a more vigorous playful attack on the table, when only the table surface is the stimulus. He also plays more elaborately with the block and the cup. He shoves the cup back and forth or brings it up to his mouth, or bangs the block against the cup. At the age of 1 year he may repeatedly place the block into the cup in his experimental activities, but this is quite beyond his powers now.

The range and general character of the playful exploitation of the sheet of paper indicate the greater psychologic maturity of the 9 months level, compared with the 6 months level.

One can also detect a greater social maturity in his responsiveness to your presence and to your laughter. You may describe this as greater interest in the social environment. This interest shows itself in numerous ways in his domestic life. He is more communicative than his junior; he is more sensitive to communication; he has assimilated more from his personal surroundings. We ask the mother, "Does he say anything?" "Yes, mama and dada." "Does he wave bye bye?" "Oh, yes!" "Has he learned any tricks?" "Yes, he can put a handkerchief over his head, when you tell him."

Behavior items like these are good indicators of what is going on in the growth of the child's nervous system. Not only do they suggest an increase of intelligence but a development of the countless social habituations, emotional trends and attitudes which steadily build up what we psychologically designate as "personality." Mental growth is permeated with conditioning factors. It is interesting to note that this particular 9 months old child is at present so conditioned that he will wave bye bye to his father, but to no one else.

The differences we note in the behavior of this pair of infants are therefore differences not only of intelligence but also of personality make-up. This comparative view may serve to remind us that there are arrests, retardations and deviations in the sphere of personality development as well as in the development of intelligence.

The comparative or normative approach, therefore, is essential to the task of developmental diagnosis. We cannot evaluate behavior altogether on its own merits but only on its comparative merits, with scrupulous regard for the age factor. Both of these children have made relatively normal developmental progress; but reverse the behavior pictures, so that the senior member of the pair reacts like the junior member, and there is a syndrome that may justify a diagnosis of mental subnormality.

COMMENT

The pediatrician, accordingly, must take a critical interest in norms of development. Such norms are the

objective standards for deriving a clinical judgment in all situations requiring a diagnosis of developmental status.

Development, as well as disease, falls within the scope of medicine. Development may be studied from purely anatomic and physiologic points of view. But it may also be studied through the functional index of behavior. By the comparative method, we have tried to demonstrate that this index is a lawful one and therefore clinically significant. We have also, perhaps, suggested one way in which a study of the normal may be incorporated into medical instruction.

185 Edwards Street.

Clinical Notes, Suggestions, and New Instruments

AUTOTRANSPLANTATION OF A TOE FOR TRAUMATIC LOSS OF A FINGER

JOSEPH E. FULD, M.D., NEW YORK

Nicoladoni[1] was the first to describe the autoplastic transplantation of a toe for the traumatic loss of a finger. He successfully performed and described an operation in which he replaced a thumb by transplanting the second toe. Since then very few cases of successful transplantation of toes to replace lost fingers have been reported.

Fig. 1. — Amputated finger.

REPORT OF CASE

G. S., a man, aged 30, while operating a bread-slicing machine, Sept. 18, 1925, accidentally amputated the distal third of the middle finger of his right hand. The wound being recent and clean, I considered this a favorable opportunity to attempt grafting a toe to replace the missing finger. The day following the injury, the patient was placed under ether, and after exceptional care of the surgical field, I made an incision at the level of the head of the fifth metatarsal bone, transversely across the dorsum of the small toe of the right foot, deepened through, exposing the extensor tendon. This was cut across and the bone disarticulated. The incision was carried farther until the toe was left attached to the foot by only a pedicle plantar flap, consisting of skin subcutaneous tissue, plantar vessels and flexor tendon. The dorsal skin edge of the stump of the finger was freshened. The end of the extensor tendon was sutured to the distal end of the extensor tendon of the toe, and the dorsal skin edge of the finger was sutured to the distal dorsal skin edge of the toe. This necessitated complete immobilization of the parts with the hand in constant juxtaposition with the foot. Plaster of Paris was not used, it being found that complete immobilization could be made by properly placed adhesive plaster and gauze bandages. The patient was placed in a Gatch bed, which permitted flexion of the body to almost an upright sitting position. This gave a fairly comfortable position and relieved tension on the bandages. I am of the opinion that at least two weeks is necessary, with constant attention and frequent dressings, for a union to take place.

Fig. 2.—Position of patient in bed, with hand and foot approximated.

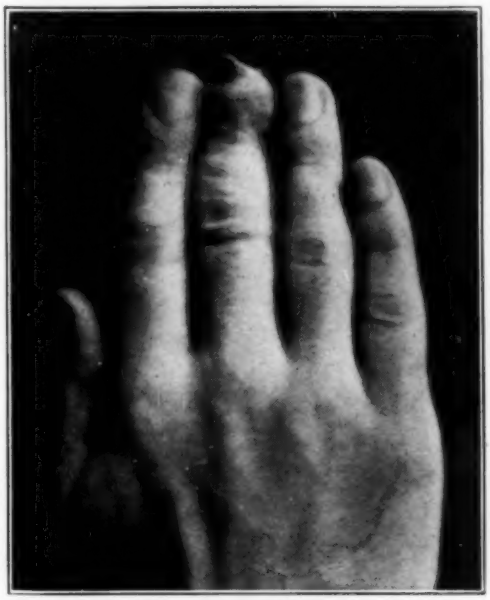

Fig. 3.—Appearance of hand two and one-half months after transplantation of toe: The transplanted toe was long enough to extend as far as the tips of the index and fourth fingers.

The second stage of the operation was performed as follows: The pedicle flap was cut across transversely, exposing the flexor tendon, which was also cut and sutured to the flexor tendon of the finger. The skin wound was closed with interrupted sutures. Passive motion, confined to flexion, was instituted on the third day after the second stage of the operation. No hyperextension was necessary or used. The cosmetic result was satisfactory, and sufficient function was obtained to permit the closing of the hand in complete flexion. Sensibility has partially returned. The color of the skin is practically the same as the color of the other fingers.

COMMENT

The value of the operation does not consist alone in giving a more sightly hand, but in restoring the normal length of the finger. It gives to those whose occupation requires exceptional use of the fingers an opportunity to continue their work. Musicians, pianists, violinists, typists and penmen will appreciate a functionally complete member. Laborers whose chief finger is the thumb will regain the grasping power that is necessary to continue their wage earning ability.

Nicoladoni advocates two methods. The first consists in a plastic cuff from the chest, into which a graft from the tibia is transferred. This permits of abduction and adduction only, whereas in the second method a transplant of the toe carries with it the extensor and flexor tendons, which offer not only abduction and adduction, but also flexion of the new thumb, which restores in great part the grasping ability of the hand.

Close application to details is essential to provide a good healthy plantar pedicle flap and the preservation of as many

1. Nicoladoni: Arch. Clin. Surg., 1900.

blood vessels as possible, the proper suturing of tendons, strict asepsis, and a careful watch to guard against hematoma, which is almost certain to become infected and destroy an otherwise perfect result. If these precautions are observed,

Fig. 4.—Condition two and one-half months after transplantation of toe.

a useful member may be added to the hand at the expense of a seemingly unnecessary toe.

995 Madison Avenue.

MODIFICATION OF TURNBUCKLE JOINT FOR TREATMENT OF SCOLIOSIS: SUGGESTION AS TO MANAGEMENT *

CHARLES N. PEASE, M.D., CHICAGO
Assistant Attending Orthopedic Surgeon, Home for Destitute Crippled Children

In 1924, Lovett and Brewster [1] published a series of articles on the treatment of scoliosis with a turnbuckle jacket. Briefly, their principle is the application of pressure on the curved part of the spine and counterpressure on the spine above and below the apex, thus correcting lateralization and, at the same time, rotation of the spinal column. This is obtained by a jacket made from a corrected plaster torso of the patient. It is divided transversely at the level of the apex of the lateral curve, at which point a hinge is fastened. Opposite this is placed the turnbuckle and lock, which are used to separate the segments and to hold them in position, respectively.

The correction obtained with this type of jacket is exceptionally good. The question is whether or not the new position can be maintained after its removal. It cannot, unless the musculature of the trunk is developed sufficiently. It is well known that plaster jackets applied to scoliotic patients cause a marked atrophy of the thoracic and abdominal muscles, sometimes to such a degree that if the patient is allowed to stand unsupported after his jacket is removed, he goes into collapse.

In order to maintain the muscular development the patient already has and to strive to increase it if possible, he must be exercised several times a day. Many short periods of exercise are better than one or two exercise periods of long duration. This is because, in the latter case, muscle fatigue occurs, which is worse than no exercise at all. Exercising below the limit of fatigue is efficacious in the development of musculature. The present jacket cannot be removed several times a day, which is desired, because it becomes weak and is easily broken.

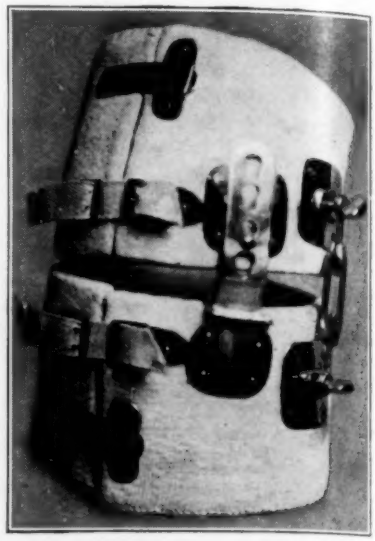

Fig. 1.—Front view of jacket, showing turnbuckle and lock.

Therefore, I have taken the turnbuckle jacket and have divided it in the midline of the back and fastened it together with hinges. This does not alter the strength or stability of the jacket and yet allows it to be removed without breaking. As easy application and removal are thus facilitated, the patient may exercise several times a day and, during the intervals, be held in a corrected position. This, I believe, may aid greatly in solving a most important problem in the treatment of scoliosis.

Covering the jacket with stockinet before application of the metal parts is a suggestion received by the department of nursing at the Home for Destitute Crippled Children.

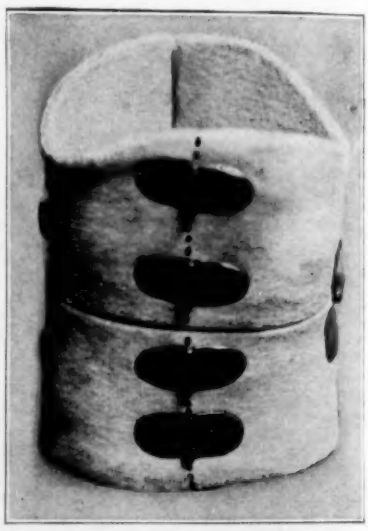

Fig. 2.—Back view, showing position of hinges; dotted line shows posterior longitudinal division.

When this paper was presented for discussion, Dr. John Ridlon called attention to the fact that the divided jacket was not new, it having been used fifty years ago. Milton Josiah Roberts [2] first used it in the treatment of Pott's disease, and due credit should be given him. However, it may be stated that Lovett and Brewster used it in a different manner and were the first to use it in the treatment of scoliosis.

104 South Michigan Avenue.

* Read before the Chicago Orthopedic Club, Dec. 11, 1925.
* From the Department of Orthopedic Surgery, Rush Medical College.

1. Lovett, R. W., and Brewster, A. H.: Correction of Structural Lateral Curvature of the Spine, J. A. M. A. **82**: 14 (April 5) 1924; Treatment of Scoliosis by a Different Method from That Usually Employed, J. Bone & Joint Surg. **6**: 4 (Oct.) 1924.

2. Roberts, M. J.: Elastic Tension and Articular Motion in Pott's Disease, M. News, Oct. 14, 1882; Clinical Lecture on the Mechanical Treatment of Caries of the Lumbar Vertebrae, Lancet, Jan. 27, 1883.

The Athenian State Little Concerned with Education.—The school age for the boy (in Athens) began with his seventh year. Custom required that each son of a free citizen should be given instruction in gymnastics and music; but, beyond keeping an eye on the morals of teachers and the conduct of their charges, the state did not concern itself with education. It rested with the parent alone to decide how much schooling his boy should receive, and the schools were in all cases private institutions, supported by the fees of pupils.—Leonard: History of Physical Education, p. 20.

SOME NEW ASPIRATING DEVICES

L. K. FERGUSON, M.D., PHILADELPHIA

Agnew Fellow in Surgery, University of Pennsylvania School of Medicine

In an effort to increase the neatness and dispatch of an operation, to reduce infection, and to minimize the trauma and manipulation, especially in operations under local anesthesia, these aspirating devices were made. They have proved so useful that I feel justified in publishing a description of them.

The aspirator is not a new apparatus in the surgical clinic, but its application is daily becoming more general and its use, once one becomes accustomed to it, is nearly indispensable. By its use, fluids in the wound or in a cavity may be quickly removed from the field, thus keeping the operating table neat and tidy. Since the aspirator can be used in a wound to remove obscuring fluids while the operator proceeds with his manipulations, nearly obviating the necessity for sponging, the speed of an operator can be materially increased. By removing pus from cavities without spilling, a large amount of wound contamination is avoided, and healing is much more rapid. In much of the work under local anesthesia, the trauma of sponging, however slight, is painful. This element can largely be eliminated by the substitution of an aspirator for a sponge.

The aspirators shown herewith have one point in common, which is absent from most aspirators in use today. Heretofore, one was frequently afraid to insert an aspirator into a cavity, especially the abdomen, for fear some delicate body, frequently the omentum, would be sucked into the fenestra, and its removal would necessitate removal of the tip or the cutting off of the aspirated part. We have been able to overcome this tendency by the insertion on our aspirators of an air valve which can be closed or opened by the operator's thumb. This valve was originally devised by Dr. Gabriel Tucker for use on the aspirators used in Dr. Jackson's clinic. When the thumb is removed from the valve, the suction at the tip is relieved. The tips are all made with an angle so that, when the aspirator is inserted into a wound, the user's hand does not obscure the field. This feature has also allowed us to substitute them for retractors in some positions, allowing the aspirator tip to keep the field dry and also to keep obstructing tissues out of the operative site.

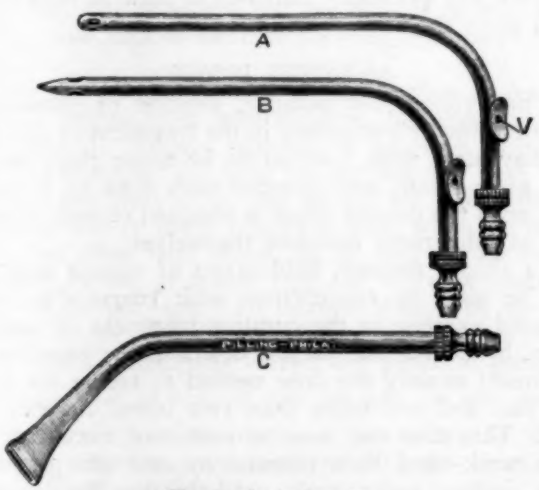

Fig. 1.—Aspirating tips.

The tips that I have devised are of various shapes made to meet various requirements. The aspirating trocar (fig. 1 *B*) is made with a sharp, round point, with fenestra close to the point. It was intended for use in fluid-containing cavities, to evacuate the cavities rapidly without spilling their contents into the operative field. The round point makes a hole in the containing wall which closely fits the aspirator tube, and with a good negative pressure in the suction circuit, no leakage occurs. As the cavity walls collapse, they may be grasped by Allis forceps and the sharp pointed tip substituted for the blunt pointed one (fig. 1 *A*) by means of which practically all the fluid can be removed.

We have employed these two tips in the aspiration of gallbladders, ovarian cysts, empyemas, liver abscesses, breast abscesses, enterostomies for intestinal obstruction, and, in short, in virtually every condition in which a fluid-containing cavity had to be opened. Depending on the size of the cavity, some time is necessary to evacuate the fluid, but this time is much less than that necessary to sponge out the wound when the fluid spills into it.

The tip illustrated in figure 1 *C* is one originally devised for aspirating in perineal operations in gynecology and obstetrics, but it has been found useful in keeping abdominal and other wounds dry. It has a broad, flat tip which allows for a rapid removal of fluids on a comparatively flat surface.

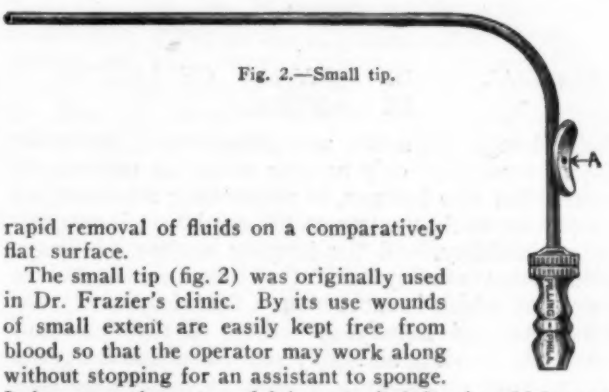

Fig. 2.—Small tip.

The small tip (fig. 2) was originally used in Dr. Frazier's clinic. By its use wounds of small extent are easily kept free from blood, so that the operator may work along without stopping for an assistant to sponge. It has proved most useful in any situation in which careful dissection is necessary, in choledochotomies and other small field work.

These tips have been adopted for daily use in the obstetric clinic of Dr. B. C. Hirst and in the gynecologic clinic of Dr. John G. Clark. In each of these clinics and in our own, a simple water pump is used to obtain the necessary suction, which is connected to a 4 liter reservoir. The water suction is cheap and noiseless, and it never gets out of order.

The nurses in our clinics are most enthusiastic over our use of the aspirators, because, by their use, considerable of their thankless labor of making sponges is reduced. The supervisor of Dr. Hirst's clinic tells me that since the use of the aspirator, the sponges in a cesarean section have been reduced from about seventy-five to thirty-five. Such a saving is an economy which is of some moment in a busy clinic.

These aspirating tips are made by the George P. Pilling & Sons Company of Philadelphia.

326 South Nineteenth Street.

A PECULIAR CASE OF TRANSMISSION OF SCARLATINA

DEAN P. CROWELL, M.D., ALBANY, ORE.

B., a boy aged 16, slept in the same bed with his brother, C., aged 14, who had scarlet fever. B., therefore, was in constant contact with his brother for two nights preceding the appearance of a typical rash, and during the usual onset with severe sore throat and high temperature. On diagnosis, the morning of the third day, B. was kept out of his sick brother's room, but remained in the same house. Eleven days after the appearance of the rash, C. left his room and associated with the family and with B. The same day an uncle, aged 35, visited in the home. Ten days after this, B. and the uncle both developed sore throat and three days later the typical rash of scarlet fever.

It seems probable that B., after being thoroughly exposed during the first three days of his brother's infection with scarlet fever, did not take the disease, but eleven days later contracted it at the same time as his uncle and then, after an incubation period of ten days, developed a typical case of scarlet fever. General symptoms were mild in all three cases, and antitoxin was not available. No other scarlatina was present in the rural district in which the cases occurred. The diagnosis of scarlet fever was not doubtful and, within thirty days, a well developed epidemic was in progress in the county.

Special Article

THE TECHNIC OF MEDICATION

A SERIES OF ARTICLES ON THE METHODS OF PRESCRIBING AND PREPARING, THE INDICATIONS FOR, AND THE USES OF VARIOUS MEDICAMENTS *

BERNARD FANTUS, M.D.
Associate Clinical Professor of Medicine, Rush Medical College
CHICAGO

(Continued from page 1213)

PERORAL ADMINISTRATION OF LIQUIDS IN GENERAL

Solid dosage forms are, as a general rule, preferable to liquid dosage not only because solids are more easily disguised but also because, in prescribing solutions, we must pay especial attention to the solubility, incompatibility, palatability, and the keeping quality of drugs. Liquid dosage is indispensable: (1) for liquid medicines the dose of which is more than a few drops; (2) for deliquescent and liquefying bodies; (3) for irritant substances, including all highly soluble substances given in fairly large doses, though some of these, especially if the dose is quite large or they are not very soluble, are best prescribed in powder form to be dissolved before taking; (4) for ease of variation in dosage—ascending or descending dosage; (5) when the patient cannot well take solid dosage forms, e. g., for children, or (6) because of somewhat greater rapidity of action.

Though all irritant drugs should be given freely diluted with fluid, which means in from a wineglassful to a tumblerful of water or watery liquid, we should, for the sake of economy, aim to make the bulk of medicines in the prescription as small as possible to be diluted before taking: for druggists charge not only in accordance with the expense of the ingredients, but also according to the size of the bottle, so that a patient has to pay considerably more for an 8 ounce bottleful containing the same active ingredients as a 2 ounce bottle. But we must not go to the extreme of preferring drop dosage merely for the sake of economy.

DROP DOSAGE

Drop dosage carries with it some uncertainty, as there is a great variation in the size of the drops, according to the capillarity constant (not the viscosity) of the fluid, the temperature, the fulness of the container, the surface from which it is dropped, and the rapidity of dropping. As drop bottles and medicine droppers vary greatly in size of orifice, the size of their drops differ. The French pharmacopeia specifies a standard medicine dropper that will yield, at a temperature of 15 C., 20 drops per cubic centimeter. With such a dropper, alcoholic fluids yield from 50 to 60 drops per cubic centimeter, according to the alcohol percentage. Ether is so tenuous a fluid that it yields 93 drops per cubic centimeter with the standard medicine dropper. Broadly speaking, drops of strongly alcoholic liquids or of volatile oils are only one-third the size of drops of water, and drops of ether or of chloroform one-fourth or one-fifth the size. On the other hand, so-called viscous fluids may have considerably larger drops than water.

Another disadvantage of prescribing drop dosage is the difficulty the average person experiences in reliably pouring or counting the desired number of drops. The simplest method is to drop directly from the bottle with its stopper partially inserted, so as to permit air to enter from above as the drops escape from below. It is well to moisten, with the fluid, the lower lip of the bottle before the dropping is started; otherwise, some difficulty is experienced at the beginning. Dropping bottles with ground glass stoppers grooved in such a way as to admit air to the bottle at one point and permit drops to escape at another point in its circumference are a great convenience but somewhat expensive. The prescriber should know that it is practically impossible to drop directly from narrow cylindric vessels, as the so-called homeopathic vials of from 4 to 8 cc. size. In such an instance the patient should be provided with a small pipet (medicine dropper) having a rubber nipple attached, which is also the least expensive and perhaps the most generally useful means of aiding patients in the counting of drop dosage of medicine. A modification of the medicine dropper, which is also usable as a container for the remedial liquid to be used in drop dosage, is obtainable. The tip of this dropper bottle is closed by means of a rubber cap, which is removed when the dropper is to be used. This is a good means of dispensing and using not only drop medication for internal use but most especially eye lotions.

In view of these disadvantages of drop dosage, it is best to prescribe drops only when "ascending dosage" is required—when the dose must be found that will give the best effect by gradual increase in its size. In such a case the variation in the size of the drop is of little importance, as the patient starts with a dose that is certainly less than the one that will ultimately be tolerated, and gradually increases it until he finds that which gives the desired result.

ASCENDING DOSAGE

In prescribing, for instance, solution of potassium arsenite (Fowler's solution) in the treatment of chorea, one may start with 5 drops to be taken three times daily after meals, and increase each dose by 1 drop daily, until the desired effect is obtained or until symptoms of intolerance manifest themselves.

In a similar manner, fluidextract of cascara sagrada may be used in conjunction with coarse diet and increased exercise in the curative treatment of constipation, by having the patient determine by experience on himself exactly the dose needed to secure not less than one and not more than two bowel movements daily. This dose may now be continued for a time—say a week—and then reduced by one-half progressively, perhaps every week, until the dose has become quite small and regularity has been established. The patient may put each dose in gelatin capsules just before taking it.

Tincture of digitalis is also frequently prescribed in drop dosage for auricular fibrillation, though best in descending rather than ascending dosage. To a patient who has not recently had digitalis substances given him and who is in great need of the remedy, as much as 60 drops of the tincture may be administered every four hours for a day or two, the effect being carefully watched; and, as soon as the desired result is obtained or untoward symptoms appear, the dose may be cut in half, soon to be still further reduced in an attempt

* This is the seventeenth of a series of articles on "The Technic of Medication." When completed the articles will be assembled in book form.

to find the smallest dose required to maintain the therapeutic action.

Diluted hydrochloric acid is frequently prescribed in ascending dosage for patients suffering from hypochlorhydria, to find the dose that will improve digestion best without producing distress. To protect the teeth, the medicament should be given well diluted and taken by means of a glass tube or a straw.

Solution of potassium iodide (official in the new National Formulary), of such strength that each cubic centimeter represents 1 Gm. of the drug, is frequently prescribed in ascending dosage in the treatment of tertiary syphilis. It is best administered diluted in liberal quantities of milk three times daily, after meals.

Creasote carbonate is efficiently given to patients with chronic bronchitis and profuse expectoration, with or without tuberculous infection, by starting with 5 drops shaken up with milk and each day increasing the dosage by 1 drop up to 15 or more, according to tolerance.

These examples may suffice to show the importance of drop dosage in everyday practice.

Ascending dosage—progressive increase of dosage—is employed not only to determine the amount of medicament most suitable for the case in hand, but also and most especially in the process of immunization, to render the patient less susceptible to the influence of certain poisons. The all important question here is the desirable rate of increase. For rapid increase, as at the beginning of antigen (such as tuberculin, pollen toxin or vaccine) treatment, when beginning with a dose much below the one that produces "reactions," doubling the dose might be permissible until a slight reaction is obtained. As soon as this point is reached, the rate of increase will have to be much more gradual. Indeed, it is often advisable to repeat without increase the dose that produced the reaction, if it was at all severe, and then to increase the dose by a much lower rate.

For the proper grading of the further increase in dosage, especially in immunization, but also for other purposes, the common sequence of figures is unsuitable. If, for example, we were to increase the dose from 1 to 2 and then to 3, and so on, the proportion of increase will be much greater at first, when we double the dose, than later when, let us say, we increase it from 9 to 10, in which case the increase would be only by 10 per cent. To increase dosage by approximately 50 per cent, the following row of figures is convenient and sufficiently correct for practical purposes:

First dose, 0.10; 2d, 0.15; 3d, 0.20; 4th, 0.30; 5th, 0.50; 6th, 0.70.

This series may be continued indefinitely by always starting with the same fractions of a ten times more concentrated solution.

If a 50 per cent increase in dosage is too high a rate, then a suggestion made by Ernst Füld [44] might be used. Füld points out that for an approximately 25 per cent increase the following row of figures might have to be employed:

1.0, 1.29, 1.67, 2.15, 2.78, 3.59, 4.64, 6.00, 7.74, 10.00.

It will be readily seen that, by moving the decimal point, the series can be prolonged indefinitely. However, these quantities are not convenient for weighing or measuring. Hence, Füld suggests that progressive dilutions be made 1 to 8 rather than 1 to 10. From any one of these solutions two further dilutions are prepared, the one seven times (designated as solution S) and the other five times (solution F). One part of solution S is used first; then one part of solution F; next, two S, two F; then four S, four F, and next one part of S of the next higher eight times stronger solution, and so forth.

The failure to appreciate the fact that the rate of increase in an immunization process must vary, that a rate suitable at first is unsuitable later, and vice versa, frequently accounts for slow results and even failure. If the lower rate of increase necessary later is employed from the first, time is wasted and the appearance of appreciable results delayed, which may disgust the patient and lead him to discontinue treatment. If the rapid rate of increase permissible at first is continued too long, the severe reactions cause undue suffering, may even do harm, and may make the patient give up the treatment.

The proper spacing of the injections in immunization treatment is also of importance. As is well known, when an antigen is introduced into the system, it causes at first what is called a "negative phase," during which the resistance of the system to the antigen is lessened. Focal reactions in the form of increased activity of the disease process may occur at this stage. Under favorable circumstances this is followed by an increased resistance, the "positive phase," which reaches a certain height and then diminishes very slowly. If the next injection is given too soon, if it coincides with the negative phase, it will still further lessen the patient's resistance. If the intervals are too long, the process of immunization becomes needlessly drawn out. From five days to a week is probably, in most cases, the proper interval between antigen injections.

DESCENDING DOSAGE

When the desired effect has been obtained, it is often good policy to continue the medicine in gradually decreasing dosage. A simple method of accomplishing this purpose is to order the patient to replace each dose by an equal volume of water. In this manner, the content of the active ingredients per dose diminishes steadily and slowly. The rate of decrease is governed by the size of the bottle. The larger the bottle in proportion to the dose, the slower is the rate of decrease. That under these circumstances the decrease is surprisingly gradual is shown by J. R. Miner,[45] who calculates that if, for example, 40 cc. of solution is prescribed, containing 400 mg. of morphine sulphate, and 1 cc. is given at each dose, and if 1 cc. of water is added to the solution for each cubic centimeter withdrawn, then at the tenth dose the morphine content would be diminished by only one fifth, and even at the twentieth dose by less than two fifths. A stage at which the dose of the drug would be one tenth of the original would occur only at the ninety-second dose of the series. Incidentally, it should be noted that the morphine would never entirely disappear from the bottle. Morphine might be prescribed in this manner for treatment of a habitué by the gradual reduction method. The first dose would be the one to which the patient has been accustomed. Bromide is well prescribed in this manner in the treatment of "night terrors" of infants or children, a teaspoonful being put into the bottle for each teaspoonful taken. Hypnotics might also preferably be prescribed in this way.

(To be continued)

44. Füld, Ernst: Therap. Halbmonatsh., May 15, 1921.

45. Miner, J. R.: Bull. Johns Hopkins Hosp. **32**: 205 (June) 1921.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, APRIL 24, 1926

THE ABSORPTION OF LEAD THROUGH THE SKIN

The special advisory committee appointed by the Surgeon General of the United States Public Health Service to determine whether or not there is a public health hazard involved in the manufacture and use of tetra-ethyl lead gasoline has made public its report, which shows that "there are at present no good grounds for prohibiting the use of ethyl gasoline as a motor fuel, provided that its distribution and use are controlled by proper regulations."[1] However helpful this report may be, it assuredly cannot be regarded as the "last word" on the subject. The committee itself clearly recognized this when it advised that with the experience obtained and the exact methods now available, it should be possible to follow closely the outcome of more extended use of this fuel and to determine whether or not it may constitute a menace to the public health after prolonged use or under conditions not now foreseen. THE JOURNAL likewise has repeatedly warned physicians[2] of the uncertainty that the situation presents.

Education is the best safeguard when experience does not afford convincing conclusions. The impression most prevalent at present with respect to the development of lead poisoning is that the toxic agent finds access to the organism primarily through inhalation of dust and fumes. Interest has thus been centered in the respiratory and alimentary tracts, and prophylactic measures have been directed to these possible channels of entry of the poisonous element. The study of the behavior of "tetra-ethyl lead" and "ethyl" gasoline, such as has recently been reported by Flinn[3] of Columbia University, directs attention to the possibilities of absorption through the sound skin, in addition to the introduction of lead through ingestion and inhalation. So far as application of ethyl gasoline to the skin of animals is concerned, entrance of lead may be secured. The storage of the element may even exceed its elimination for the time being. Flinn insists that this is entirely in agreement with medical experience. Thus far, cases of lead poisoning have not been found at filling stations or garages. Flinn remarks that the time between the man's exposures may be long enough to permit him to remain in apparent good health though he may be storing lead. It may take years before he stores enough or before a sufficient change takes place in his metabolism to cause the symptoms commonly attributed to lead poisoning. The fact to bear in mind, Flinn adds, is that there is no doubt that a storage of lead takes place under exposure.

Lead stored in the body constitutes a potential lead poisoning. These comments are not intended to controvert the conclusions of the committee. They should serve for the present merely to reemphasize an underappreciated avenue for the entrance of lead into the body.

1. Committee Report of Ethyl Gasoline, Miscellany, J. A. M. A. **86**: 370 (Jan. 30) 1926.
2. Tetra-Ethyl Lead—Another Industrial Hazard, editorial, J. A. M. A. **83**: 1511 (Nov. 8), 1924; The "Ethyl" (Tetra-Ethyl Lead) Gasoline Report, ibid. **86**: 353 (Jan. 30) 1926.
3. Flinn, F. B.: Some of the Potential Public Health Hazards from the Use of Ethyl Gasoline, J. Indust. Hyg. **8**: 51 (Feb.) 1926.

THE HOOKWORM CARRIER

Infestation with hookworm is by no means always of equal intensity among the thousands of persons who harbor the parasite. Theoretically, every hookworm in the intestine may be producing a pathologic condition. Those who deal with the persons affected realize, however, that a large number of the persons whose feces contain hookworm ova are apparently well and strong. If the few hookworms harbored are causing harm, it is not apparent. Cogent evidence of this has further been supplied by actual measurements of groups of children from villages and rural districts in areas of hookworm infestation. Smillie and Augustine,[1] who undertook the latest study of the effect of varying intensities of the infection on the physical condition of school children, argue that if any measurable injury is done by the parasites it should definitely affect the physical development of the growing child. If light infestations are found to have little or no effect on the normal growth and development of a child, then it seems fair to assume that they would have no greater deleterious effect on adults.

The records of Smillie and Augustine refer solely to *Necator americanus*, the species that occurs in our Southern states. They indicate, as might have been anticipated, that heavy hookworm infestation (with 500 or more worms) causes marked retardation in the normal growth in height and weight and lowers the hemoglobin of children of school age. An intensity of from 100 to 500 hookworms produces measurable injury. Such intensities of infestation should be regarded as true hookworm disease. Light hookworm infestation (from one to 100) produces no measur-

1. Smillie, W. G., and Augustine, D. L.: Hookworm Infestation, Am. J. Dis. Child. **31**: 151 (Feb.) 1926

able retardation in the normal development of children of school age, nor is the hemoglobin of this group reduced to a measurable degree. An infestation of twenty-five worms may be considered as the economic base line of cure. An infestation of twenty-five worms or less represents a carrier state, and is not true hookworm disease.

The prophylaxis of hookworm disease, as well as the cure of those infested, is complicated by the literally enormous numbers of persons concerned. The approach to a problem of such magnitude often calls for compromises that are not necessary under less formidable conditions. The treatment that may advantageously be accorded to a few patients cannot always be extended with equal thoroughness when many thousands are involved. This represents in some measure the situation prevailing with respect to hookworm infestation. Accordingly, if one is justified in regarding the latter from a quantitative or intensity standpoint and considering persons showing the mildest types of involvement and no physical injury as "carriers" rather than "patients," it may be advisable at present to concentrate personal attention on those in greater need of immediate relief. Smillie and Augustine believe that elimination of carriers can be accomplished only by sanitation and education. These procedures, they aver, can be used effectively as the sole weapons of offense, and, in time, will eliminate both the disease and the carrier; but this method is very slow. It is a more economic and humanitarian policy to use treatment to control the disease and sanitation and education to eliminate the carriers.

CREEPING ERUPTION

About the middle of the sixteenth century, botany began to receive attention as a branch of knowledge which, as was then believed, it was important for physicians to study; and from that time forward, for more than two centuries, it formed a regular part of the curriculum in all the leading medical schools. The two chairs of botany and anatomy were not infrequently combined. Fallopius, for example, held the chair of anatomy, surgery and botany in the University of Padua.[1] This association has continued almost to the present generation in recognition of the helpfulness of botany in the search for drug-yielding plants or their cultivation. Zoology, on the other hand, has not been recognized to the same extent by the medical fraternity, except as certain specialized fields of biologic interest have become developed. It should be admitted that a somewhat desultory consideration has long been accorded to certain groups of animal parasites that may infest the human organism. Not until the significant rôle of insects as vectors of disease was clearly recognized did entomology, a branch of zoology, come into world-wide scientific prominence. Presently protozoology began to attract attention, until it has actually become the subject matter of serious consideration in every school of hygiene and public health;[2] and the study of zooparasites of other types is also being vigorously prosecuted.[3]

The helpfulness of highly expert knowledge of the lowlier forms of animal life for medicine has again been illustrated in a recent study[4] of "creeping eruption," a disease that has generally been considered a cutaneous myiasis or invasion of the skin by the larvae of certain flies. The location of such parasites is not confined to wounds or sores, but the larvae are wont to penetrate long distances through more or less superficial tunnels. The identification of the responsible agents as fly larvae has been positively made in a number of well authenticated instances. In rarer cases, nematode invasion of the skin has been reported. In a human disease having a linear skin eruption with an advancing end apparently caused by a migrating parasite, observers[4] in the United States Bureau of Entomology have detected a nematode larva approximately one-fiftieth inch in length and one twelve-hundredth inch in breadth. It was recovered from each of five excisions, representing four patients and as many different localities. The causal nematode is reported here for the first time and described under the name *Agamonematodum migrans* by Kirby-Smith, Dove and White. For the disorder occasioned by it, these investigators propose that the name "creeping eruption" shall for the present be specifically retained.

This cutaneous nematode is apparently not uncommon in at least the southeastern and southern coastal areas of the United States. Kirby-Smith has observed more than 2,500 cases during the fifteen years of his practice at Jacksonville. It has been seen also in the Carolinas, Georgia, Alabama, Texas and Oklahoma. Some persons are more susceptible to infection than others. White persons are more susceptible than negroes. Infection occurs more often in children than in adults, and is most frequent during the summer following rainy weather. The origin of some cases in proximity to sewage disposal suggests a possible relationship with intestinal worms of man, while other cases have originated at points distant from such likely sources of contamination. The evidence at hand tends to indicate that rats might be the normal host of the adult worm. Poultry, cats, dogs and other animals may possibly be concerned. Several promising modes of treatment have been proposed. Successful prevention must await further knowledge of the life history of the adult of the nematode parasite.

1. A review of this development is given by Buck, A. H.: The Growth of Medicine from the Earliest Times to About 1800, New Haven, Yale University Press, 1917.

2. Hegner, R. W., and Taliaferro, W. H.: Human Protozoology, New York, the Macmillan Company, 1924.

3. Chandler, A. C.: Animal Parasites and Human Disease, New York, John Wiley & Sons, 1922.

4. Kirby-Smith, J. L.; Dove, W. E., and White, G. F.: Creeping Eruption, Arch. Dermat. & Syph. **13**: 137 (Feb.) 1926.

SALIVARY DIGESTION IN THE STOMACH

When saliva is admixed with hydrochloric acid even under conditions in which the resulting hydrogen ion concentration—the acidity, as it is now usually expressed—is small, the starch-digesting property of the secretion is rapidly destroyed. This is a fact demonstrated in many biochemical laboratories by medical students. A generation or more ago, after the discovery of this phenomenon of amylase destruction by the acid of the gastric juice, it was assumed that salivary digestion must necessarily come to an abrupt end as soon as the bolus of food admixed with salivary enzyme reached the acid-secreting stomach. The pioneers in this study failed to take into account the comparatively slow motility of the latter organ. Yet more than twenty years ago Starling [1] was wont to remind his hearers that the swallowed mass lying in the fundus of the stomach, impregnated with saliva and kept at the body temperature, is penetrated only with difficulty by any juice secreted in the stomach, so that, in those animals whose saliva contains ptyalin, the process of salivary digestion can go on unchecked, at any rate in the center of the mass, for from twenty to forty minutes.

Essentially the same conclusion regarding the persistence of the salivary digestion of starch in the stomach has recently been reached by Bergeim [2] of the University of Illinois College of Medicine. His studies of salivary digestion in the stomachs of normal men showed that, on the average, 76 per cent of the starch of mashed potatoes and 59 per cent of the starch of bread was converted to maltose, an additional percentage being changed to dextrins. This considerable degree of starch conversion was generally brought about within from fifteen to thirty minutes after the meal was finished, active amylase disappearing and free hydrochloric acid appearing simultaneously. Obviously, as Bergeim has pointed out anew, in disease one may expect salivary digestion to be influenced by the quantity and digestive power of saliva secreted and by the motility and secretory power of the stomach. In achylia, salivary digestion in the stomach will be undisturbed and will proceed to practical completion for this type of digestion. If the stomach possesses a bulky and highly acid residuum, such as is sometimes found in ulcer with retention, or if the secretory response of the stomach is rapid, salivary digestion will evidently stop sooner than it otherwise would.

The observations indicate that a rapid development of gastric acidity is not incompatible with a high degree of salivary digestion, because, if food is properly masticated and starch digestion allowed to proceed for fifteen minutes or so in the stomach, almost as much starch is broken down as when digestion can proceed for a longer time. For this the high amylase concentration of saliva is responsible. The use of amylase preparations in medicine has lost its former vogue. From the standpoint of "replacement therapy" there is little, if any, indication of serious need of them. With starch presented in readily digestible form, the salivary enzymes have great opportunity to promote its conversion to the desired alimentary products to be augmented by supplementary digestion in the long reaches of the intestine. Responsibility for proper digestion of starch is thus being transferred more largely to the technic of the food factory and the kitchen instead of the purveyor of digestive ferments.

1. Starling, E. H.: Recent Advances in the Physiology of Digestion, Chicago, W. T. Keener & Co., 1906.
2. Bergeim, Olaf: Intestinal Chemistry, III, Salivary Digestion in the Human Stomach and Intestines, Arch. Int. Med. **37**: 110 (Jan.) 1926.

Current Comment

THE OMENTUM

One will seek in vain in textbooks of physiology for any reference to the omentum; yet the pathologist is intimately concerned with its function. During health the omentum is a comparatively passive structure which, like many other parts of the body, would not even betray its own existence if no effort were made to discover it by anatomic search. A surgeon [1] has termed the omentum "the abdominal policeman," intimating that "it travels around the abdomen with considerable activity, and is attracted by some sort of information to neighborhoods in which mischief is brewing." Thus it happens that when inflamed or septic areas develop or foreign bodies are introduced into the abdomen, a reaction occurs which consists essentially in the walling off and isolation of the inflamed or injured area from the remainder of the abdominal cavity. The omentum becomes adherent to the offending zone and, when this is sufficiently small, encapsulates it. In explanation of these remarkable performances, the occurrence of active omental movement has sometimes been assumed. Although it is not easy, in view of the known structure of the tissue, to conjecture how intrinsic excursions of the omentum in the abdominal cavity can be brought about, the possibility has been taken into account by investigators, notably Florey and Carleton [2] of Cambridge and Oxford, respectively. Their experiments clearly establish that the omentum is totally incapable of any intrinsic activity of the organ itself; but it is moved passively by postural changes of the body, by the peristalsis of the alimentary tract, and occasionally also by movements of the diaphragm. Through such displacements of the abdominal structures, the omentum comes into contact with injured areas or foreign bodies. The mode of attachment consists in the long known production of a layer of fibrin at the point of contact. The power of fibrin production by the omentum is said to be far greater than is that of the peritoneum. According to the English students of the subject, leukocytic emigration also is prompt, so that in the

1. Morison, R.: Introduction to Surgery, 1910.
2. Florey, H., and Carleton, H. M.: The Nature of the Movements of the Omentum, J. Path. & Bacteriol. **29**: 97 (Jan.) 1926.

course of a few days, organization of the fibrin layer by new blood vessels and fibroblasts results in the encapsulation of the offending zone by connective tissue fibers. In other words, the powers of adhesion and encapsulation are intrinsic, whereas the movements of the omentum are passive and extrinsic.

THE HEART IN MERCURIC CHLORIDE POISONING

The familiar picture of the consequences of ingestion of lethal doses of mercuric chloride includes a succession of symptoms that may develop with varying rapidity and often only slowly reach their terminal stages. Cramps, bloody vomitus and diarrhea often occur; anuria frequently follows an acute tubular nephritis; and death in uremia is a delayed feature. Acute collapse may occur, but it rarely terminates in an immediately fatal outcome. Thus, among more than half a hundred fatalities recorded within a few years by a single German observer,[1] only one occurred early. The cause of such occasional early deaths after acute mercurial poisoning, undeniable, though they are rare, remains to be accurately ascertained. Nephritis will not always explain them, for there may be circulatory collapse with little evidence of renal damage and without uremia. Kohn[2] has made electrocardiographic studies in experimental animals which suggest that direct myocardial injury may account in part, at least, for this early toxic death. The quantities of mercuric chloride per kilogram that showed this action were of the same order as might be assumed for absorbed mercuric chloride from the average amount ingested by human beings. The heart therefore deserves early attention in cases of such intoxication.

THE INTESTINAL PHASE OF GASTRIC SECRETION

The question of the mechanism of the secretion of gastric juice is a physiologic theme that deeply interests the clinician. The regulation of gastric digestion becomes a task for him not only in connection with alimentary disorders but sometimes also for the accomplishment of adequate nutrition, on which a patient's ultimate recovery or well being may largely depend. Not long ago, reference was made in THE JOURNAL[3] to the evidence for the existence of various "phases" of secretion into the stomach, notably the cephalic, gastric and intestinal. The gastric aspects have naturally excited discussion from the outset, notably since the pioneer and lately verified observations of William Beaumont on the effects of local stimuli to the gastric mucosa. The psychic factors have become recognized through the widely reported studies of Pawlow and emphasized by the work of subsequent investigators. There is a peculiar interest attached even in lay circles to the idea of a psychic influence on the work of the digestive organs; possibly it is thought to illustrate the much vaunted "power of mind over matter." The intestinal phase of gastric secretion, however, has for the most part been overlooked or neglected; yet it has no small importance from a clinical standpoint. The beautiful experiments of Ivy, Lim and McCarthy[4] at the University of Chicago show that the pouch of the entire stomach secretes gastric juice after a latent period of one or more hours, when a mixed meal is ingested and enters the intestine directly without contact with the stomach wall. The delay in the gastric response is presumptive evidence that the effective agent is to be found in products of digestion as they arise in the intestine; at any rate, meat, starch and fat as such do not act. Alcohol, a stimulant of gastric secretion, has long been known to act when introduced directly into the lower bowel; and water also stimulates, though not invariably. Perhaps the response in this case is due to the resulting increase in circulating blood, which in turn promotes secretion. From a practical standpoint it needs to be borne in mind that the intestine affords a pathway for stimulation of the gastric glands. In attempts to "spare" the latter, such "long distance influences" need to be taken into account.

THE SEARCH FOR ACUTE FEBRILE ANEMIA IS BEGUN

In a recent issue of THE JOURNAL,[5] reference was made to Moschcowitz's novel description of an "acute febrile pleiochromic anemia with hyaline thrombosis of the terminal arteries and capillaries." At the time, it was intimated that such precise formulation of nosologic data was likely to bring to light further instances of the same condition; for the history of medicine furnished many illustrations of how careful description of supposed rarities has made physicians more alert in discovering duplicates. A companion case to Moschowitz's[6] clinical entity has been reported by Brill[7] from Portland, Ore.; and he has in turn called attention to a comparable observation by Macintosh and Cleland[8] in Sydney, Australia. Three cases of an apparently identical morbid condition have thus afforded a fairly complete description of the clinical manifestations and pathologic anatomy of a disease unknown heretofore. Moschowitz has detailed some of the principal pathologic manifestations; Brill has succeeded in effecting a cure in one case through blood transfusions given in small amounts at frequent intervals; and the Australian clinicians, through isolation of bacteria from the tissues at necropsy, have raised the question of a microbic etiology. Thus the problem of the newly identified acute febrile anemia is before the medical profession.

1. Franz, F.: Die im Deutschen Reich während der Jahre 1897-1905 amtlich gemeldeten Vergiftungen mit Sublimat, Arb. a. d. k. Gsndhsamte **34**: 1 (March) 1910.
2. Kohn, L. A.: Acute Mercuric Chloride Poisoning, Arch. Int. Med. **37**: 225 (Feb.) 1926.
3. The Newer Gastric Physiology, editorial, J. A. M. A. **85**: 1401 (Oct. 31) 1925.
4. Ivy, A. C.; Lim, R. K. S., and McCarthy, J. E.: Contributions to the Physiology of Gastric Secretion, II, The Intestinal Phase of Gastric Secretion, Quart. J. Physiol. **15**: 55, 1925.
5. Febrile Pleiochromic Anemia, Current Comment, J. A. M. A. **85**: 1308 (Oct. 24) 1925.
6. Moschcowitz, Eli: An Acute Febrile Pleiochromic Anemia with Hyaline Thrombosis of the Terminal Arterioles and Capillaries, Arch. Int. Med. **36**: 89 (July) 1925.
7. Brill, I. C.: Acute Febrile Anemia, Arch. Int. Med. **37**: 244 (Feb.) 1926.
8. Macintosh, A. H., and Cleland, J. B.: A Case of Rapidly Increasing Anemia with Irregular Pyrexia and Death, Australasian M. Gaz. **21**: 462 (Sept. 20) 1902.

PROCEEDINGS OF THE DALLAS SESSION

MINUTES OF THE SEVENTY-SEVENTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT DALLAS, TEXAS, APRIL 19-23, 1926

HOUSE OF DELEGATES

First Meeting—Monday Morning, April 19

The House of Delegates convened in the Baker Hotel, and was called to order at 10 a. m. by the Speaker, Dr. Fred C. Warnshuis, Michigan.

Preliminary Report of the Committee on Credentials

A preliminary report of the Committee on Credentials was submitted by the Chairman, Dr. J. D. Brook, Michigan, who reported that there had been filed with the committee registrations totaling 114 members with proper credentials.

The report of the committee was accepted.

There being no objections, the report of the Committee on Credentials was considered the roll call of the House. A quorum being present, the Speaker declared the House duly constituted and ready for the regular order of business.

The next order of business was the presentation, correction and adoption of the minutes of the Seventy-Sixth Annual Session. The Secretary announced that the minutes had been printed and sent to each member of the House of Delegates registered at Atlantic City, with a request for corrections, but that none had been offered.

On motion of Dr. A. T. McCormack, Kentucky, seconded and carried, the minutes of the last session were approved as printed.

Radiogram from Dr. Simmons

The Secretary read the following radiogram from Seapoint Cape, South Africa:

"Congratulations to delegates on Twenty-Fifth Anniversary. Creation of House made possible accomplishments of the quarter century. May Dallas session be glorious success. Regret absence. "GEORGE SIMMONS."

ADDRESSES OF EXECUTIVE OFFICERS

Address of the Speaker, Dr. F. C. Warnshuis

The Vice Speaker, Dr. Rock Sleyster, Wisconsin, took the chair, after which the Speaker delivered his address:

Members of the House of Delegates:

For the fifth time, by reason of your tolerance and kind consideration, I am privileged to preside during your annual deliberations and to address you at the opening session of this meeting. I would be unappreciative indeed did I fail to convey to you my hearty thanks for the trust you repose in me. It will be my purpose to acquit myself in a manner that justifies the confidence expressed. In doing so I bespeak your assistance.

DELEGATES' RESPONSIBILITY

As delegates, representing constituent units of our Association, a responsibility that extends beyond and supersedes personal opinions or quests is reposed in you. On various occasions the House of Delegates has been approached by individuals not included in its membership, requesting the passage of resolutions for personal and selfish interests, and not planned for the good of all. Each Delegate may well consider before introducing a resolution the reason for its introduction, and whether or not a personal consideration is involved.

By your action at our last session it was made possible that proposed resolutions could be sent to the Secretary one month prior to the convening of this House. There has been a negligible response. This procedure was advanced in order that your work might be expedited rather than to limit enactments. Your speaker will rule that, during this session, resolutions may be introduced during the first two sessions and that those subsequently presented will require unanimous consent or else conform to the provisions set forth in our By-Laws.

ASSOCIATION'S ACTIVITIES

By virtue of my office it has been my privilege to attend the meetings of the Board of Trustees. I would that it were possible for every Delegate to be present at the Board's sessions. I have been impressed by the earnest sincerity with which our Trustees assume the responsibility that we place on them. In considering the business matters that come before them, whether it be the purchase of a $65,000 press, the problems of a constituent county unit, legislative activities, public education, scientific work or what not, I have yet to see the faintest inkling of selfish quest or individual prejudice. Each transaction is considered from one fundamental basis, and that is the interest of the physician as an individual and the Association as a whole. I want to voice again the belief of this House that our confidence is well placed in our Trustees, and that they merit our heartiest thanks for their contribution of personal time and thought for the advancement of the profession's interests.

We are extremely fortunate in having executives who are intensely eager, forgetting self, in conducting our business and organizational affairs. The contributions they are subscribing, that which they are achieving, the example they reflect cannot but command respect and commendation. That same spirit and service characterize and permeate the entire personnel at Headquarters. A splendid loyalty to the profession predominates. I feel that we, as Delegates, representing our entire fellowship and membership, owe much of our present organizational stability to the work that is being accomplished by our officers and executives.

What the past year has wrought is clearly set forth in the report of the Board of Trustees. A delegate fails in his duty if he has not read this report. He doubly fails if he neglects to acquaint his state society with these reports of their parent national organization and neglects thereby to obtain whole-hearted interest and support in his state for the work that is being accomplished. Your Speaker is deeply impressed by the possibilities that can be made to result from the activities we are engaged in if our entire profession will but become actively concerned with them.

May I not urge on you that as you return to your state society you will avail yourself of the opportunity and devote time and effort in securing an increasing degree of interest and extended sustained support to these activities. Surely we can no longer stand by in placid attitude when the opportunity is ours to a greater extent than ever before, to set forth these ideals and aims of the medical profession.

As an Association, as units forming our federacy and as individuals, our professional and personal responsibility is divided into two general divisions: the pursuit of scientific study and research and the enhancing of our personal capabilities as physicians to apply these proved principles in the prevention and treatment of disease and, second, the education of the public as to the truths of scientific medicine.

Our professional standing, our scientific advancement, the sifting of the real from the unproved rests with those who are associated with our universities, laboratories and hospitals. In those environments they are able to pursue research and study of the problems partly or still remaining unsolved and establish on a sound basis that which scientific research has uncovered. These workers command our respect for unfolding

the erstwhile mysteries of physiologic and biologic functions and the pathobacteriologic changes resulting in disease conditions. As they unfold and establish principles and tenets, he who is engaged in general or special practice must exhibit their application. He cannot remain five or ten years in the rear of the march of scientific progress. He will, if he fails to devote sufficient time each month to acquiring this knowledge. In failing in this, he lowers the profession's standing, for we are appraised not always as a group but as individuals. It therefore devolves on state and county units to pursue vigilantly a program of scientific activity that will enable its members to remain abreast of scientific progress and reflect that progress in their daily contact with their patients. They must guard against the mediocre, the obsolete, and bring up to standard the professional knowledge and work of their members. We lay ourselves open to justified criticism if organized medicine condones, by inactivity, the deficiencies and vagaries of its members. My earnest desire in this is for greater, well planned and concentrated instruction of members in order that they may receive sustained education abreast of the progress of our science. A higher, much to be desired standard and type of practice will then be evolved. This I hold to be an outstanding obligation of our county units—an obligation that is apparently neglected and to which state societies should devote thought and action. Your Speaker recommends that this House direct the Secretary to refer to our state societies this problem.

The second general division of associational responsibility is that of the educational enlightenment of the public as to what the science of medicine may and can achieve for man's individual and collective welfare. This is the greatest public contribution that we can make to all peoples. Our science has made wonderful strides. We are able not only to prevent but also to cure many of the physical ills that beset mankind. We can extend the span of life and enhance it. But of what avail is this ability if we fail to disseminate this knowledge to the public? The public has evidenced an increasing eagerness to receive facts regarding scientific medicine from sources that are authoritative. Our federacy is that source and agency. Our responsibility is an outstanding one. The duty is ours to expend greater time and effort in imparting this knowledge. To do so, we must with concerted, well thought action disseminate these scientific facts and refute the vagaries and fallacies of those who have, and are holding forth as pseudoscientists or as cultists and scientists on theories and principles that rest on a factless premise. By the imparting of the knowledge that we hold, by setting forth that which has been proved, we render a dual service to humankind in conserving physical health, and relieving them of human ills and in exposing those who are posing as possessed of ability to treat disease by means and vagaries that are scientifically valueless. The purpose of your Speaker in so expressing himself is to add emphasis anew to the importance of public education in scientific medicine, and to urge that this House take added action that will promote increased activity to that end.

STATE MEDICINE AND CONTRACT PRACTICE

This House of Delegates and the Judicial Council have defined and voiced opinions as to the Association's attitude toward so-called state medicine, contract practice and group practice. There can be no confusion, doubt or questioning as to definition, inclusiveness or policies, for our Association has very clearly set forth its position. In like manner, expression has been voiced in regard to clinics of the free, charity and "pay" classification. Notwithstanding this action, the resolutions adopted and the Judicial Council's activities, there are evidenced in many communities tendencies toward rapidly growing development of this type of medical practice. They are being aided, abetted and sponsored in many instances by medical men, members of constituent units and of our Association, who, hiding under the guise of public health education, seek to justify their actions and ignore in doing so the Association's enunciated policies. They defeat county and state societies' efforts toward regulation and direction of these forms of medical practice. Your Speaker does not purpose entering on a detailed discussion of the problems at this time, but he does desire to recommend that the House give consideration toward formulating some type of action that will consist of disciplinary measures whereby your former enactments will be observed and complied with by Fellows of the Association, who evidently consider themselves immune from your regulatory enactments. The query, hence, is propounded: Shall we not consider the recommendation and institution of procedure that will command compliance with the enactments of this Association?

PLACE OF ANNUAL MEETINGS

Our Association's annual meeting entails a tremendous amount of work to provide satisfactory arrangements for meeting places for the scientific sections, general meetings, commercial and scientific exhibits, in addition to hotel accommodations for those in attendance. From contact with our officers who are concerned with these details I am impressed with the labor and expense involved and the hundred matters that require adjustment as well as difficult local problems that call for finesse and judgment to overcome. There are but relatively few cities that afford satisfactory accommodations for the holding of our annual meeting. At times we condone unsatisfactory conditions and expend unnecessarily large amounts of money for alterations and building changes. It would therefore seem wise that we change our By-Laws, empowering the Board of Trustees to designate, after careful study and investigation as it only can through proper officers, the place for the holding of our annual meetings. Your Speaker therefore recommends that this comment be accepted as a notice of change in our By-Laws and that the Reference Committee on Constitution and By-Laws bring in the wording of such amendment for your further action at this session.

DEATHS

During the year there have passed on to eternal rest, Thomas McDavitt, Grover Wende, F. A. Stine and G. F. Keiper. Their demise is recorded in deep sorrow and with our sincere sympathy to their immediate relatives. Recognition is accorded to the time and labor they have contributed for the advancement of the interests of scientific medicine and our organization. We who are still privileged to serve must assume their tasks and carry on.

CONCLUSION

Your Speaker feels that, since each Delegate is actively alert to the purposes, activities and needs of our Association in its several professional and public contacts, further comment or discussion of our problems would at this time be superfluous. Your program of work, for this session, is well set forth in the reports of trustees, councils and committees. I am confident that your combined wisdom and their consideration will result in recording indicated action in a manner that will redound to your credit and inspire increasing confidence in your legislative acumen.

The address of the Speaker was referred to the Reference Committee on Reports of Officers.

Reference Committees

The Speaker resumed the Chair and announced appointments to reference committees:

SECTIONS AND SECTION WORK

T. B. Throckmorton, Chairman..Section on Nervous and Mental Diseases
B. R. Shurly.....Section on Laryngology, Otology and Rhinology
J. L. Rothrock.....Minnesota
W. P. Eagleton.....New Jersey
W. G. Ricker.....Vermont

RULES AND ORDER OF BUSINESS

H. P. Linsz, Chairman.....West Virginia
E. M. Neher.....Utah
W. R. Bathurst.....Arkansas
W. H. Seeman.....Louisiana
William Kuykendall.....Oregon

MEDICAL EDUCATION

F. B. Lund, Chairman.....Massachusetts
J. N. Hunsberger.....Pennsylvania
J. A. Witherspoon.....Tennessee
William Allen Pusey.....Illinois
B. R. McClellan.....Ohio

LEGISLATION AND PUBLIC RELATIONS

H. M. Brown, Chairman.....Wisconsin
Donald Macrae, Jr.....Iowa
A. D. Dunn.....Nebraska
W. A. Cook.....Oklahoma
A. J. Bedell.....New York

HYGIENE AND PUBLIC HEALTH

A. T. McCormack, Chairman.....Kentucky
S. W. Welch.....Alabama
C. E. Mongan.....Massachusetts
C. E. Humiston.....Illinois
L. H. McKinnie.....Colorado

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

J. W. Van Derslice, Chairman.....Illinois
C. T. Pigot.....Montana
D. E. Sullivan.....New Hampshire
E. A. Hines.....South Carolina
D. E. McGillivray.....Washington

REPORTS OF BOARD OF TRUSTEES AND SECRETARY

E. Eliot Harris, Chairman.....New York
C. J. Whalen.....Illinois
Holman Taylor.....Texas
E. J. Goodwin.....Missouri
A. H. Bunce.....Georgia

REPORTS OF OFFICERS

A. W. Booth, Chairman.....New York
V. G. Vecki.....California
W. Gerry Morgan.....District of Columbia
A. E. Bulson, Jr.....Indiana
J. N. Henry.....Pennsylvania

CREDENTIALS

J. D. Brook, Chairman.....Michigan
G. C. Madill.....New York
C. E. Piersall.....Nevada
G. C. Cottam.....South Dakota
Henry Boswell.....Mississippi

MISCELLANEOUS BUSINESS

B. L. Bryant, Chairman.....Maine
Charles O'Donovan.....Maryland
E. E. North.....Missouri
M. L. Stevens.....North Carolina
E. D. Ebright.....Kansas

Address of President William D. Haggard

The Speaker introduced the President, Dr. W. D. Haggard, Nashville, Tenn., who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker, Members of the House of Delegates, and Ladies and Gentlemen:

Among the many activities of the Association during the last year, a persistent effort has been made to popularize the periodic health examination of the apparently healthy. This has been done by editorials, special articles, addresses by the officers of the Association, and especially by a meeting of the secretaries of the component state medical societies, for which a special two days' program was arranged to consider the question.

As an officer, I have labored in season and out of season to bring this matter before the attention of every state, county and local medical society that I have had the honor of addressing, together with many educational and other lay organizations.

Every other profession and utility is striving for service to its patrons. The annual health examination is a new type of service that the profession has never yet employed as a whole for the benefit of its clientele. There is no gainsaying the great importance and wonderful opportunity for the betterment of mankind, and especially in preventing future disability, than the universal health examination. It would add not only years to life, but life to years. It would in all reality increase the scope of each individual's life by detecting the insidious maladies of all types in their incipience. The skill of the physician could be utilized in the anticipatory prevention of the many maladies whose early recognition makes for cure. It would mitigate the age long wail of the medical profession that patients present themselves too late. This is particularly true of cancer and the precancerous lesion. The oftener the examination from head to toe, the surer the beginnings of new growths can be determined. If cancer alone were the only disease that could be detected by these examinations, it would be of incalculable benefit.

It is the insidious diseases of the great organs, the degenerative diseases, that especially go undetected unless an examination, even in apparent health, discloses their first evidences.

The greatest field of the physician, which has been so long neglected, is the health guidance of his clientele. His judgment, wisdom, experience and knowledge can be massed in an attack against all forms of abnormal and unhealthful living, bad eating, and environmental and occupational disorders.

Social hygiene, in its best sense and in its own most rightful application by a man of sane and practical experience, could be employed to throttle abnormal behavior tendencies and bad habit formations and in the training of character.

It is not only the physical handicap but also the mental and environmental that so often needs surveillance. Thus will the true physician come into his very own in the close and intimate management of the health and happiness of his patients and render a vital service for which no one else is so transcendentally fitted.

Blanks of the physical examination, including the history of the patient, which he himself can fill out, should be in the waiting room of every physician for the use of his office patients, with a little placard over it, as employed by the Pennsylvania Medical Society, inviting the patient to take a health examination blank, fill it out, and be examined that he may have better health and longer life.

When once inaugurated, there could be no objection to the physician notifying his clientele by mail that the yearly examination would be due on a certain date, just as dentists do about their prophylactic treatments. It is not only a courtesy but a valuable thing to the patient and would embolden a large percentage to apply for examination who would neglect it if not reminded of it.

Each medical society should determine its own charge, both minimum and maximum, which it thinks would be wise and reasonable for the annual health examination.

The publication of the "Manual for the Conduct of Periodic Examinations," which has been issued by the Association under the direction of the Bureau of Health and Public Instruction, is very complete and helpful and has been very well received by the profession. It should be in the hands of every physician in the United States.

It is obvious that mere propaganda, while all important in the beginning of a great movement of this sort, cannot realize its object unless it has as a basis a plan whereby every one in the profession can be brought to the acceptance and employment of the plan. It is clear that such a far reaching effort cannot rest on a few men or on the officers alone of the various societies, but it must be put in the hands of the individual members.

It would seem, therefore, that on the county society as a unit should be devolved the responsibility of giving every one of its members the information and the facilities, and further, through its cooperation, to bring the matter to the attention of every individual in the community.

To that end and to the practical utilization of the idea of periodic health examinations, the following plan has been elaborated by the retiring president as a suggestion in order to get the maximum number of patients examined by a maximum number of family physicians:

PLAN FOR PROMOTION OF PERIODIC HEALTH EXAMINATIONS

1. The House of Delegates should recommend to the thirty-four states that have not yet acted, that the manual be obtained from headquarters at cost price, together with a suitable number of examination blanks, and supplied to each individual member.

2. The House of Delegates should recommend to the county societies that a special meeting on this subject be held at least once a year in order to popularize the plan and bring it into being.

3. A medical society clinic emphasizing the need, value, method and technic in the conduct of health examinations, and their bearing on preclinical medicine, should be arranged by local or neighboring clinicians.

4. A strong, active committee in each county society on periodic health examinations should supervise the inauguration and perpetuation of the health examination.

5. A nation-wide educational campaign should be inaugurated during "Health Week," or some designated period in cooperation with the existing board of health or with some local activity, such as the Anti-Tuberculosis Association, or other lay organization, to interest the civic clubs and other organizations in the great importance and benefit to be derived from this plan. Health parades with banners carried by Boy Scouts, films, large posters, and folders could be utilized, as was so successfully done by the Illinois Medical Society.

6. A statement in the nature of a circular letter should be prepared by the county society and sent impersonally as a statement from the county society to the clientele of the various members, calling their attention to the importance of the annual health examination and urging their acceptance of it at the hands of their physicians.

7. Many organizations, lodges, clubs, large industrial corporations, etc., could greatly facilitate the idea by having cards mailed to their various members on their birthdays, urging the importance of the acceptance of the birthday physical examination.

8. The medical society as such should start the campaign by having as many of the individual members as possible to undergo the examination, first, as an educational measure and, secondly, to imbue the individual members themselves with the importance and far reaching value of the plan. This method was employed by the King's County Medical Society. Nothing will stimulate the universal application as much as the profession themselves who so sorely need it, utilizing the idea for their own benefit as well as for the advancement of the general scheme.

9. The press should be requested to carry articles prepared and issued by the county society, preferably unsigned, as a news article or under the signature, if desirable, of the officers of the society, explaining the importance of periodic physical examinations and the benefit to be derived by the health client.

These recommendations are to strengthen the work already done, crystallize it and have it activated by the House of Delegates.

No more humane, scientific and socially and economically beneficient movement for the well being of the American people could be fostered and put into nation-wide practice than the universal periodic health examination by the American Medical Association.

Address of President-Elect Wendell C. Phillips

The Speaker introduced the President-Elect, Dr. Wendell C. Phillips, New York, who delivered the following address, which was referred to the Reference Committee on Reports of Officers:

Mr. Speaker and Members of the House of Delegates:

Since the World War, the histories of foreign nations have been marked by intense nationalism. This nationalistic trend has led them to take advantage of every possible opportunity to exploit their merits, and medical science has been no exception. Unfortunately, many of the medical discoveries thus far proclaimed and promoted as national interests have not fully proved their worthiness. In other words, the rush for publicity has led the promoter far afield from the pathway of proved science.

From Switzerland has come the Spahlinger treatment of tuberculosis; from England, the Gye-Barnard work on cancer, also the Dreyer vaccine for tuberculosis; from France, the Calmette work on vaccination against tuberculosis with living organisms; from Germany, Blumenthal's investigations on cancer, and from Denmark, Sanocrysin.

Not one of these discoveries has thus far been established as of great value, although, according to Park, the Calmette work on vaccination seems to possess possibilities of virtue.

The United States, on the contrary, without having made any great pretense to the forcing of its scientific discoveries into the nationalistic program, has given to the world remarkable discoveries and scientific advances in medicine.

The work of the Dicks and of Dochez and Blake on scarlet fever seems to be established on a definite scientific basis. The discoveries made on the virtues and the relation of light to rickets represent another real achievement in the advance of science.

The toxin-antitoxin prevention of diphtheria has been definitely and positively proved. An intensive antidiphtheria campaign carried on in the city of Auburn, N. Y., has been so successful that no deaths from diphtheria have occurred in that city for the last two years. An antidiphtheria campaign now going on in New York State carries the slogan "No diphtheria in New York State in 1930," and the state commissioner of health believes that this is possible. It would seem that the future holds out hope that diphtheria—the dread destroyer of child life—may ultimately disappear, at least as an epidemic disease.

We may also claim a distinct advance in studies related particularly to the elimination of scarlet fever, measles, and possibly whooping cough. Moreover, the United States may truly be called "teacher to the world" in organization and methods of preventive medicine.

All these are distinct achievements in the advance of medical science, but in this country they have not been promoted in a nationalistic spirit. They have been offered freely to the world as our contribution. Let us not hesitate to do all in our power to give our own people the knowledge and the benefit of these discoveries. The public should know that children may be made immune from diphtheria as surely as from smallpox, and every physician should endeavor to persuade all patients to safeguard their children, especially those of preschool age, by the employment of preventive treatment.

During the last few years, many of our leaders of medical thought, and particularly those clothed with the responsibility of outlining medical policies, have given serious consideration to the subject of public health education. There has been a slight awakening of the medical conscience as to the trusteeship of physicians as promoters of individual and community health. These pioneers have become alive to the fact that physicians only are qualified by heritage, by education and by experience to give to the public the basic principles of health preservation, and the protection of life that is afforded by sanitation and the scientific application of all the phases of preventive medicine. Given such responsibility, I ask you in all seriousness whether the medical profession of the country has ever lived up to its great opportunity to teach the people how to keep well. It sounds like a simple thing to do, but the reticence of medical men and the innate fear of publicity, the supposed restriction of ethical limitations, have tended to prevent these great educators from fully covering this proper field for a physician's activity.

Nevertheless, there has gradually developed on the part of the public demands for public health education. Gradually, great newspapers and newspaper syndicates are coming to realize that public health knowledge is a valuable commodity for which the people are willing to pay. This tendency is leading newspapers, magazines and newspaper syndicates to realize that the public must be given the true facts regarding individual and community health. This further knowledge in turn is showing its influence by the gradual elimination from these publications of the publicity which is sought by nostrums, cults, quackery and other menaces to the public health. This naturally engenders a desire to purvey only well founded information regarding health matters.

In the quest for such information on the part of great publications, they have learned that organized medicine is the only possible source from which correct information can be obtained. Our headquarters is well equipped to furnish every form of advice and counsel that any publication may need regarding irregularities and fakes. We are able from headquarters to supply health educational material covering a wide variety of topics, but we must not forget that a

hundred and fifteen million people in the United States need information and education both as individuals and as communities. The American Medical Association has positively and definitely entered the field of public health education. We have shown this in various ways, particularly by the publication of *Hygeia,* which is distinctly a public health journal, devoted to individual and community health. I am happy to say that this journal is proving its worth and is rapidly becoming the text for sound public health principles.

We have also endorsed the scheme for periodic health examinations, and we are beginning to promote this wise, humane, healthful program through our county and state societies. We are also entering into cooperative relationship with great newspaper and magazine agencies, through which information from the highest medical sources is furnished to the public over the names of the men who write the articles. These are all steps in the right direction, but as I see it they mark only the entering wedge into what must eventually become universal health education, participated in by every medical practitioner as one of the basic duties of his profession. There should be in the United States a great public health preventive medicine university with a hundred and fifty thousand physicians as teachers. Universal health education of the public received from a properly informed physician will eventually result in a new type of patient and an increased activity for the physician, which will greatly enhance not only his field of service but also his financial status.

I am convinced that modifications in the undergraduate curriculum that will provide for broader education in preventive medicine, public health, psychology and sociology should receive serious consideration on the part of medical educators.

To this end I recommend that the House of Delegates urge every practitioner of medicine to become a public health educator in the broadest sense of that term; that the American Medical Association devote sufficient time to the development of ways and means for properly conveying personal and community health education; and that either by the appointment of a special committee or through one of the bureaus of the Association an intensive survey of the general subject of public health education should be inaugurated and reported on at the 1927 meeting of the House of Delegates.

REPORTS OF OFFICERS

Report of Board of Trustees

Dr. Edward B. Heckel, Pennsylvania, read an abstract of the report of the Board of Trustees. The report was referred to the Special Reference Committee on the Report of Board of Trustees.

Dr. William Allen Pusey, Illinois, said: "The report in connection with the medical relief in times of disaster was taken up in conference with the surgeon generals of the several departments and with the executive officers of the Red Cross, and they gave it their entire approval. Surgeon General Ireland, however, suggested that by a little change in phraseology, we make it plain that we had to do clearly with medical relief. So with permission we would like to change the report from 'Report of the Committee on Disaster Relief' to 'Report of Committee on Medical Relief in Disaster,' and to change the several phrases throughout the report, adding 'medical' before 'disaster' in connection with it to indicate more clearly that this is a matter of medical relief."

Resolution in Memory of Thomas A. McDavitt

On motion of Dr. E. B. Heckel, Pennsylvania, Dr. A. R. Mitchell, Nebraska, read the resolution adopted by the Board of Trustees in memory of Dr. Thomas A. McDavitt, deceased:

Dr. Thomas McDavitt, for thirteen years a member of the Board of Trustees of the American Medical Association, and for two years its chairman, died at his home in St. Paul, Minn., March 4, 1926.

Dr. McDavitt was born in St. Louis, Mo., May 15, 1857, graduated from the Chicago Medical College in 1879, and entered on the practice of medicine at Minneiska, Minn., immediately thereafter. In 1891 he located in St. Paul and was engaged in practice in that city, specializing in ophthalmology and otolaryngology, until the time of his death.

The son and the grandson of physicians, Dr. McDavitt had instilled in him from his childhood the high principles and honorable traditions of the profession in which he served for nearly forty years. He was thoroughly loyal to the ideals of the true physician, and stood with all his strength against any effort to drag them down.

Early in his professional career Dr. McDavitt identified himself with medical organization and gave himself freely to its advancement. For nearly twenty years he was secretary of the Minnesota State Medical Association. At four annual sessions of the American Medical Association he served as a member of its House of Delegates, and in 1913 was elected as one of its Board of Trustees, in which capacity he served continuously until his death. As chairman of the Finance Committee, as a member of the Executive Committee and of the Committee on Scientific Exhibit, Dr. McDavitt rendered invaluable service to the Board of Trustees and to the Association. He looked on his duties seriously, and his every official act was performed with the most conscientious regard for what he believed to be for the best interest of the medical profession as represented in and by the American Medical Association. Always tolerant and considerate of the views of others, Dr. McDavitt was none the less guided by his own convictions, formed after mature deliberation.

In his official and personal relations with his fellows, his every act was marked by high minded courtesy. Because of his fidelity to his every trust, his unswerving loyalty to his profession, his kindly bearing and his willingness to do his full part in every task, he won and held a high place in the esteem and affections of those who were privileged to serve with him on the Board of Trustees.

Dr. McDavitt served his state with the same fidelity that characterized his service as an officer of this Association. For fourteen years he was secretary of the Minnesota State Board of Medical Examiners. In this capacity he stood between the people of his state and unqualified persons who sought license to practice the healing art. He demanded that the terms of the law be complied with, and was uncomprising in his stand against quackery and fraud.

In the affairs of the Federation of State Medical Boards of the United States, Dr. McDavitt took an active part and always supported the efforts of this and other agencies to secure efficient medical service for the public. Be it

Resolved, By the House of Delegates of the American Medical Association, that through the death of Dr. Thomas McDavitt this Association has lost a friend and counselor who, through his untiring and devoted service, played an important part in its development and in extending its influence as a scientific society and its benefits as a philanthropic organization. And be it further

Resolved, That while we bow in sorrow that our friend and Fellow has passed on and that we are deprived of his companionship and helpful counsel, we are deely grateful for the privilege of our long association with him and revere his memory, because of his work for this Association and because of his devotion to the noblest traditions of our profession.

Report of Secretary

Dr. Olin West presented an abstract of the Report of the Secretary. The report was referred to the Special Reference Committee on the Report of the Board of Trustees, so far as matters that are reported on by the Secretary are related to subjects reported by the Board of Trustees. That part referring to amendments to the Constitution and By-Laws was referred to the Reference Committee on Constitution and By-Laws.

Supplementary Report of Judicial Council

Dr. M. L. Harris, Illinois, Chairman of the Judicial Council, presented a supplementary report as follows, the report of the Judicial Council having been printed in the handbook:

During the past year there have been submitted to the Judicial Council, for decisions, questions that have made it clear to this Council that a few slight changes are desirable in our fundamental law if consistent and effective decisions are to be made possible.

As the matter stands at present, there is a lack of uniformity in the laws of the several county societies and state associations, so that when appeals are taken to the Judicial Council, the Council finds itself unable to render consistent decisions owing to irreconcilable contradictions found in the laws of the societies or associations taking the appeal. The appeals that give rise to the greatest difficulties are those which involve a question of membership. It seems to be quite generally recognized that the county society has the sole right to determine who shall or shall not be admitted to membership. As membership in a state association and in the national association is made dependent on membership in a county society, it is provided in the laws of many state associations that a physician who has been refused admittance to his county society may appeal to the council or board of censors of his state association and in some instances to the House of

Delegates, and the board of censors may overrule the action of the local society and direct that the person be admitted to membership. It is at this point that the difficulties arise. Should the board of censors or the House of Delegates overrule the action of the local society and direct that the rejected person be admitted to membership, there is no way of enforcing the mandate.

Of course, the state association may revoke the charter of a local society, which may be likened to killing the goose to get an egg which, after all, may be bad. Certainly the remedy is too destructive, but without some remedy the situation reaches an impasse which the Judicial Council is unable to bridge over.

Appeals have come to this Council in which diametrically opposite conditions are found to exist. For instance, a local society refused to admit a physician to membership, and an appeal was taken to the state council, which overruled the action of the local society and directed that the physician be admitted to membership. The local society refused to comply with the order of the state council, and the matter was referred to the Judicial Council.

Again, a local society admitted to membership a physician that the state association considered most objectionable and directed that the local society expel him. The local society replies that the physician in question is *persona grata* to its members and refused to comply with the demand of the state association.

The Judicial Council is without power to act in either case. In the one instance, local prejudice or personal animosity prevents a good man from becoming a member of his state and of the national association, and in the other instance, local indifference forces a most undesirable man into the state and national associations.

At present there is no adequate remedy in such cases. We believe that the difficulty may be overcome in one of two ways:

The local society may not be the sole or final judge of who shall be admitted to membership, or some provision may be made by which the state and (or) national associations may, under certain conditions, determine its own membership.

It does not seem feasible or perhaps possible to remove from the local society the right to judge as to who shall be admitted to its membership. The attempt to force a local society to accept as a member one who has been rejected by a fair vote of the society can result only in disaster to the organization. On the other hand, local prejudice or personal animosity or spite may, as has already come to the attention of this Council, by keeping a man out of his local society, unjustly debar him from membership in our organization. This injustice may be remedied by making some provision by which one who has been unjustly kept out of his local society may become a member of his state and thus of the national association.

No one should be permitted to apply directly to the state association for membership unless and until he has been definitely refused admittance to his local society and until he has appealed his case to the board of censors or council of the state association, and only then provided the board of censors or council has given his appeal a fair hearing and is convinced that he has been unjustly kept out of his local society, and that it is impossible to reconcile the local society to admitting him to membership, and provided further that the board of censors or the state council recommends him for membership in the state association. The state House of Delegates may then elect him to membership, in which case he would thereby become a member of the American Medical Association.

The House of Delegates of a state association should also have the power to expel a man from membership, in case the local society refused to do so, on the advice and recommendation of the board of censors or council.

The House of Delegates of the American Medical Association, on the recommendation of the Judicial Council, should have the power to expel a member in case the state association and local society refused so to do.

The Judicial Council suggests that the House of Delegates of the American Medical Association and of the several state associations make such amendments to their By-Laws as will make effective the foregoing recommendations.

The report of the Judicial Council, taking into consideration certain changes in the Constitution and By-Laws, was referred to the Reference Committee on Constitution and By-Laws.

Report of Council on Medical Education and Hospitals

Dr. N. P. Colwell, Illinois, presented an abstract of the report of the Council on Medical Education and Hospitals. The report was referred to the Reference Committee on Medical Education.

The Speaker drew to the attention of the Reference Committee on Medical Education the instruction of the House that was given at the St. Louis session and repeated at the San Francisco session at which this Council was charged with taking up the study of the nursing problem and bringing some definite report to the House.

Report of Council on Scientific Assembly

Dr. J. Shelton Horsley, Chairman of the Council on Scientific Assembly, read the report, with the following interpolation after the section referring to the Section on Stomatology:

Of course, it is highly important that we have some contact with dentists. Only two papers at the last session of the Association could be classed as stomatologic papers. The others could be assigned to other sections. It seemed unnecessary to continue a section with such small attendance on that particular subject, whereas it could be distributed among other standard sections.

The report was referred to the Reference Committee on Sections and Scientific Work.

Report of Committee on Narcotic Drugs

Dr. W. C. Woodward, Chicago, read the report of the Committee on Narcotic Drugs:

The House of Delegates, at its last meeting at Atlantic City, appointed a committee on narcotic drugs. The main committee consisted of: Dr. William C. Woodward, Chairman, Chicago; Dr. S. Dana Hubbard, New York; Dr. C. G. Jennings, Detroit; Dr. Alexander Lambert, New York; Dr. Dean Lewis, Baltimore; Dr. George McCoy, Washington, D. C.; Dr. Olin West, Chicago, and Dr. Orrin S. Wightman, New York. The Advisory Committee consisted of: Dr. Ray Lyman Wilbur, Stanford University, Calif.; Dr. Frank Billings, Chicago; Dr. Hugh Cabot, Ann Arbor, Mich.; Dr. James F. Coupal, Washington, D. C.; Dr. Hugh S. Cumming, Washington, D. C.; Dr. George E. de Schweinitz, Philadelphia; Dr. William D. Haggard, Nashville, Tenn.; Dr. Merritte W. Ireland, Washington, D. C.; Dr. Franklin H. Martin, Chicago; Dr. William E. Musgrave, San Francisco; Dr. Wendell C. Phillips, New York; Dr. William A. Pusey, Chicago; Dr. George H. Simmons, Bromsgrove, England; Dr. Charles T. Sturgeon, Los Angeles, and Dr. Hubert Work, Washington, D. C.

The committee has held one meeting during the year. As the result of that meeting, the attention of the committee was called to the apparent inadequacy of instruction in medical schools with respect to narcotic addiction. It was voted to bring this matter to the attention of the Council on Medical Education and Hospitals and to the attention of the House of Delegates.

On the basis of a letter received from the Surgeon General of the Army, Dr. Merritte W. Ireland, a resolution was adopted recommending that the Board of Trustees approve a policy of turning over narcotic drugs confiscated by the customs service and Bureau of Internal Revenue, not necessary for the current uses of the government, to the war and navy departments in sufficient quantities to build up a reserve of these drugs for use by the army and navy in case of war.

The report was referred to the Committee on Hygiene and Public Health.

Report of Committee on Accidents from Zinc Stearate

Dr. Isaac Abt, Illinois, read the report of the Committee on Accidents from Zinc Stearate Dusting Powders:

The committee has held one meeting during the year, and Dr. Woodward has been in conference with the manufacturers. Progress has been slow. We have insisted that the package be of metal or that the zinc stearate be contained in a metal box and that it have a self-closing device. The Illinois State Board of Health, through its secretary, has passed regulations insisting that these recommendations made by this committee be complied with. I ask that the committee be continued in some way or other so that something may finally be accomplished.

The report was referred to the Reference Committee on Hygiene and Public Health.

Report of Committee on Trachoma Among Indians

Dr. Wilder, Section on Ophthalmology, read the report of the Advisory Committee to Commissioner of Indian Affairs on Trachoma Among American Indians:

In suggestions offered to the Commissioner of Indian Affairs in regard to the problem of the control of trachoma among the Indians, the committee urged the importance of a careful survey with complete records to determine the prevalence of the disease among the members of the various tribes and nations of Indians.

The committee also urged the importance of prevention of the spread of the disease among Indians not already affected, by proper segregation of active cases in schools and villages so far as feasible, and also by a campaign of education as to the manner in which the disease is conveyed from one to another and the simple measures of cleanliness that will prevent such spread of the trouble.

The committee was gratified to hear from the commissioner that its suggestions were accepted and are being acted on. In a communication of Feb. 16, 1926, he says:

> The work of reducing the morbidity for trachoma has been aggressively carried on the past year. We are continuing our Southwestern trachoma campaign, with three units working. During the last fiscal year our special physicians examined a total of 68,223 Indians, and operated on 8,455. In addition, they treated 5,581 without surgery. This does not include the patients operated on and treated by the regular physicians. We have established a temporary trachoma hospital at Albuquerque with bed capacity for twenty patients, which has been operating at capacity during the greater part of the time. We have also established a trachoma unit at the Laguna, N. M., Sanatorium, and it is doing excellent work.
>
> In addition to the active measures, we have been stressing the educational and prophylactic phase. We are enclosing a circular that has recently been sent out to the service. In accordance with the suggestions of your committee, we have designated two annual trachoma weeks, during which all workers in the service, including missionaries and ministers, are requested to stress the importance of this problem.
>
> In concluding, the office wishes to express again its appreciation for your helpful suggestions and assistance, and signify its hopefulness that the American Medical Association will continue the services of the committee at its next annual session.

Again in a letter of March 2, 1926, he says:

> Receipt is acknowledged of your letter dated Feb. 27, 1926, concerning the trachoma work in the Indian Service. Concerning the suggestion of your committee that a complete survey is necessary, the office is now making up a permanent record of trachoma at each agency and school, and we hope eventually to get a complete survey. We now keep a monthly record which will show the number examined, the cases found, and the disposition of each case by jurisdictions.

The circular referred to is directed to superintendents of Indian schools and physicians in the service, and insists on certain hygienic details in schools and meeting places looking toward the prevention of the spread of the disease.

The committee recommends to the House of Delegates the appointment of an additional member to the committee, Dr. Francis I. Proctor, formerly a practicing ophthalmologist in Boston, now residing in Camden, S. C., who is much interested in the subject, and who has time to devote to it.

The report was referred to the Reference Committee on Hygiene and Public Health.

NEW BUSINESS

Resolution on Changes in Premedical Courses

Dr. Southgate Leigh, Virginia, read the following resolution, which was referred to the Reference Committee on Medical Education:

WHEREAS, The Council on Medical Education and Hospitals has already made certain investigations looking to changes in premedical courses so as to enable students to graduate in medicine at an earlier age than is now possible, and

WHEREAS, Former President William Allen Pusey, in his address before this body, urged that the medical course itself be shortened by one year, therefore be it

Resolved, By the House of Delegates that the Council be requested to consider feasibility of allowing medical students credit for courses taken during the summer months, in a manner similar to the plan followed in the academic departments.

The Council is further requested to confer with the various medical schools, asking their cooperation in this important movement.

Resolution on Official Recognition of Irregular Practitioners

Dr. Southgate Leigh read the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, Through the expenditure of large sums of money, and the employment of prominent and influential individuals to represent them, the irregulars are making systematic and strenuous efforts to obtain official recognition in every state in the Union, and,

WHEREAS, Many irregulars are illegally practicing in various states, and, through financial and influential backing, are making successful efforts against prosecution, and

WHEREAS, In both of these matters there has at times been a lack of systematic and determined effort to thwart their aims,

Resolved, By the House of Delegates that the Trustees be requested to take the necessary steps to aid and direct the profession in the various states properly to combat these vicious movements.

Resolutions on Trained Nurses

Dr. E. Eliot Harris, New York, read the following resolution, which was referred to the Reference Committee on Medical Education:

Resolved, That there is a great need throughout the country for a basic trained nurse, and that all pupil or student nurses shall receive basic training in training schools connected with hospitals giving courses of two years. The curriculum should be thoroughly revised so as to provide bedside instruction, class room lectures and demonstrations and, above all, the teaching of the art of nursing by precept and example so as properly to fit the pupils or students for their work as nurses in the hospitals and in the homes.

Graduates, after passing the state examination, should be registered as trained or, if preferred, registered nurses. Such trained or registered nurses may become public health or other specially designated nurses after being properly admitted to postgraduate schools for nurses and passing the required examination.

Resolved, That the Board of Trustees appoint a committee on nurses and nursing education to investigate and report to the next House of Delegates the results of its investigation and constructive thought on the nursing question and especially on the subject of increasing the number of bedside nurses throughout the several states; the Committee on Nurses to be empowered to confer with the National Nurses Association, hospitals and other committees having similar objects.

Resolutions on a Home for Incapacitated Practitioners

Dr. D. E. Sullivan, New Hampshire, read the following resolution, which was referred to the Reference Committee on Miscellaneous Business:

Resolved, That the President be, and hereby is authorized and directed to appoint a committee of five representing the different sections of the country to make a survey of the physical condition and financial status of its members who are incapacitated for earning their support by the practice of their profession with the objective of establishing, managing and sustaining a home or homes for their care and maintenance, and be it further

Resolved, That the said committee is directed to make a full and comprehensive report of its findings with recommendations to the annual meeting of the House of Delegates in 1927, and the Board of Trustees is hereby empowered to appropriate such sum of money as may be necessary to carry into effect said survey.

Resolutions on Expert Opinion Evidence

Dr. G. E. Follansbee, Ohio, introduced the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

WHEREAS, The present court procedure in presenting expert opinion evidence in both civil and criminal cases has in many instances brought public criticism and disgrace on both the legal and the medical professions, and

WHEREAS, The present procedure, in many cases, is believed to defeat the administration of even handed justice, and to operate notoriously in favor of the rich as compared to the poor before a court on similar charges, and

WHEREAS, An effort is being made in many states by the bar associations and medical societies of those states to correct such maladministration of justice, and to relieve the legal and medical professions of the public criticism now received, and

WHEREAS, The American Bar Association is actively pursuing the foregoing laudable effort, therefore be it

Resolved, By the House of Delegates of the American Medical Association, that it recognize the urgent need for such remedial legislation and such change in court procedure as will correct the abuse of expert opinion evidence; that it approve the efforts of the various bar and medical associations; that it strongly favors the use of experts appointed by the courts as a corrective to the present abuse; that it believes the expert opinion witness should be allowed to present and read a written opinion based on examination and not on a hypothetic question; that fees due expert opinion witnesses appointed by the court should be fixed by the court and taxed as a part of the cost in the case; and be it

Resolved, That the American Medical Association offers its cooperation by such means as lies in its power to promote such legislation as will be mutually satisfactory to the legal and medical professions toward the correction of present unsatisfactory procedure of presenting expert opinion evidence, and the Board of Trustees is hereby requested to use the facilities of this organization in such a way as to give effect to the sentiments expressed in this resolution and, be it further

Resolved, That a copy of this resolution be sent to the American Bar Association.

Resolution on Ad Interim Meeting

Dr. Wells P. Eagleton, New Jersey, presented the following resolution, which was referred to the Reference Committee on Constitution and By-Laws:

The delegates from the Medical Society of New Jersey are instructed to use their influence and vote:

1. That an ad interim meeting of the House of Delegates of the American Medical Association be held at the headquarters of the Association annually, as in the opinion of New Jersey it is impossible for the House of Delegates to do its full duty by the medical profession by meetings but once a year during the scientific session.

2. That the following words be added to Chapter III, Section 1, of the By-Laws following the word "Association":

"An ad interim meeting shall be held at the headquarters of the Association annually."

Resolutions on Contract Practice

Dr. A. D. Dunn, Nebraska, read the following resolution, which was referred to the Reference Committee on Legislation and Public Relations:

Inasmuch as contract practice is absorbing an ever-increasing portion of general medical practice on account of the rapid development and concentration in business and industry, and inasmuch as brokers under the guise of health, accident and sickness insurance in which they purport as middlemen to sell medical services to the laity or entering the field of medical practice, be it

Resolved, That: 1. The whole matter of contract practice be investigated under the direction of the Judicial Council.

2. The trend and dangers to patient and profession inherent in this movement be analyzed and clearly set forth.

3. Recommendations as to the policy of the American Medical Association toward contract practice, its functions, limitations and control be submitted to the House of Delegates for action at its annual session in 1927.

4. Systematic effort be made to get clearly before the constituent societies the results of this investigation and whatever action the House of Delegates may take in the matter.

Adjournment in Honor of Deceased Colleagues

Dr. A. T. McCormack, Kentucky, moved that when the House of Delegates adjourned, it adjourn in honor of the memory of Drs. Stine, Keiper and Wende, three of our colleagues who have been lost to us during the year.

The motion was seconded.

Dr. Emmet Keating, Illinois, suggested as an amendment that Dr. McDavitt's name be added to the list.

The motion was carried as amended.

Communications

The Secretary read messages from Dr. G. E. de Schweinitz, the Philadelphia County Medical Society, and the American College of Surgeons. The communication from Dr. Martin, American College of Surgeons, as the Board of Trustees has always determined the advisability or desirability of sending such delegates, was referred to the Board of Trustees.

The meeting adjourned at 12:30 p. m.

(To be continued)

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Typhoid Outbreak at Calexico.—An outbreak of typhoid fever, involving sixty-seven cases up to April 15, is reported by the California State Board of Health at Calexico in Imperial County, near the Mexican line. All of the cases reported have occurred among consumers of milk from a single dairy. As a result of an investigation made by the state epidemiologist, Dr. Charles H. Halliday, the source of the outbreak was traced to a "missed" case on the dairy. Pasteurization of all milk supplies was ordered by the local health officer, Dr. Alfred L. Heck, immediately on the discovery of the first case. The state health department predicts the development of a total of at least 100 cases in the present epidemic. A complete investigation has been made and the epidemic is under control.

State Medical Meeting.—The fifty-fifth annual session of the California Medical Association will be held at Oakland, April 26-May 1, under the presidency of Dr. Edward N. Ewer of that city. The first two days will be given over to preconvention clinics at the Providence, Merritt and Fabiola hospitals; they will be conducted by Dr. Gabriel Tucker of the University Hospital, Philadelphia; Dr. Emil G. Beck, Chicago, and Dr. John de J. Pemberton, Mayo Clinic, Rochester, Minn.; the afternoons of the preconvention days will be given over to golf. Headquarters will be at the Hotel Oakland, Thirteenth and Harrison streets; the addresses of the retiring and incoming presidents will be delivered at the first general session at 10 o'clock, April 28; the second general session will be at the same hour, April 29, and will be addressed by the three visiting speakers noted above and by Col. Edward L. Munson, Medical Corps, U. S. Army. Among others, Dr. Ray Lyman Wilbur, president of Stanford University, will address the third general session, April 30, at 10 o'clock, on "The Deficiencies of Modern Medicine." There will be a smoker following the meeting of the house of delegates, Wednesday evening, and at that time, a musicale for the ladies, a dinner dance Thursday evening, and on Friday evening a bridge tournament. Other entertainment and luncheons have been arranged for various groups.

DISTRICT OF COLUMBIA

Personal.—Dr. William Calhoun Stirling, Jr., has been appointed associate professor of genito-urinary surgery at Georgetown University Medical School, Washington.——Dr. Arthur G. Coumbe, Washington, has been appointed manager of the U. S. Veterans' Bureau office in Honolulu, Hawaii.——Dr. Harvey W. Wiley addressed the Philadelphia Forum, April 8, on "Living Longer—How Can it Be Done?"; this was the occasion of the observance of health day in Philadelphia; a trophy was presented to the school that won the highest average in health sanitation obtained in competition with twelve junior high schools in the city.——According to *Science*, Dr. Victor C. Vaughan will attend the third Pan-Pacific Science Congress, to be held in Tokyo, October 27-29.——Lieut. Col. Charles F. Craig, Medical Corps, U. S. Army, has been appointed director of laboratories and of the department of clinical pathology and preventive medicine at the Army Medical School.

CHICAGO

Fund for Cancer Research.—Mr. E. F. Holmes has bequeathed $100,000 to the University of Chicago to further research on the problem of cancer; Miss Harriet F. Holmes, a daughter, has been associated with Maude Slye, Ph.D., in cancer research at the university for many years.

Tuberculosis Conference.—For the first time in years the Mississippi Valley Conference on Tuberculosis will be held in Chicago, June 14-17, at the Edgewater Beach Hotel. There will be representatives from the tuberculosis associations of Ohio, Indiana, Illinois, Michigan, Wisconsin, Iowa, Missouri, North Dakota, South Dakota, Minnesota and Nebraska. The purpose of the conference will be to discuss plans for future needs in tuberculosis work.

Institute for Juvenile Research.—Founded sixteen years ago as a research organization connected with the juvenile court, the Institute for Juvenile Research now is operated by the state. Friends of the institute are raising $275,000 to finance a five year research program; they recently held a luncheon at the Hotel Sherman, which was attended by more than a thousand persons. Among the speakers were Dr. Adolf Meyer, Henry Phipps professor of psychiatry at Johns Hopkins University School of Medicine; William A. Neilson, president of Smith College; Dr. Ludvig Hektoen, Dr. Isaac A. Abt and Prof. Charles E. Merriam, Ph.D., of Chicago. The secretary of the committee, Joseph H. Schaffner, 36 South Franklin Street, reported that more than $175,000 had been raised toward the research fund.

Society News.—Dr. Harry A. Singer and Bertha Kaplan, among others, addressed the Chicago Pathological Society at the John Crerar Liberty, April 12, at 8, on "Streptococcus Erysipelatus Toxin-Antitoxin."——The April 23 meeting of the Institute of Medicine of Chicago at the City Club was devoted to the presentation of work by Chicago investigators; there were in all nine papers presented. Dr. B. Brouwer, professor of neurology, University of Amsterdam, gave an address, April 22, under the joint auspices of the institute and the University of Chicago at the Harper Memorial Library on "The Projection of the Retina on the Brain"; Sir Arthur Newsholme, London, England, will lecture at the Harper Library, May 10 and May 11, 4:30 p. m., on "The Present Position of the Tuberculosis Problem" and "The Growth of Social Insurance in Britain."

MASSACHUSETTS

Physician Fined.—Dr. Walter C. Harris, Worcester, was recently fined $500, it is reported, under an indictment charging him with issuing false prescriptions for narcotic drugs and selling narcotics illegally. Dr. Harris paid the fine.

University News.—Dr. Knud Faber, professor of internal medicine, University of Copenhagen, gave an address at the Harvard Medical School, Boston, recently, on "The Intestinal Origin of Pernicious Anemia."

Society News.—Dr. Arthur H. Ruggles, lecturer on psychiatry, Yale University School of Medicine, addressed the Massachusetts Psychiatric Society at the Boston Psychopathic Hospital, March 31, on "Mental Hygiene and the College Student."

Licenses Revoked and Suspended.—Information has been received from the Board of Registration and Medicine of Massachusetts that the registration of Dr. Albert Astrin was revoked by the board, February 11, and that the registration of Dr. Walter C. Harris, Worcester, was suspended for three months from February 11.

Personal.—Dr. Amasa Elliot Paine, Brockton, has resigned from the state service as medical examiner for no. 1 Plymouth District on account of ill health, and Dr. Walter W. Fullerton, Brockton, associate examiner, has been appointed to succeed him.——Dr. Hugh Heaton, New York, and formerly of Boston, has been elected superintendent of the Malden Hospital, Malden.

Sir Arthur Newsholme Gives Cutter Lectures.—Sir Arthur Newsholme, recent principal medical officer of the local government board of England and Wales, will deliver the Cutter lectures on preventive medicine at building E, Harvard Medical School, Boston, April 26-27, 5 p. m., on "The Present Position of the Tuberculosis Problem" and "Remaining Problems in Maternity and Child Welfare." Physicians, medical students and others are cordially invited.

MICHIGAN

Camps for Children.—There were thirty-five camps for boys and girls, sponsored by various organizations in Detroit last summer, which, according to the Child Welfare Committee of the Federation of Women's Clubs, provided outings for 13,085 children, at prices ranging from $4.50 to $12 a week among the camps that charged. There were eleven camps that were free. The outings provided were usually of two weeks duration, but, in addition, the Community Union provided one day outings for 38,365 children. The cost of the camps, not including the one day outings, was $18,274 for 12,297 children, or about $14.85 per child.

Society News.—During March the state medical society conducted postgraduate conferences at Adrian and at Kalamazoo.——Dr. Charles A. Elsberg, New York, addressed the Wayne County Medical Society, recently, on "The Diagnosis of Tumors of the Central Nervous System."——Dr. Charles H. Frazier, John Rhea Barton professor of surgery, University of Pennsylvania School of Medicine, will address the Wayne County Medical Society, April 30, on "Surgical Lesions Originating in the Structures of the Pituitary Body."——Drs. Orla H. Gillett and William R. Vis addressed the Kent County Medical Society, Grand Rapids, April 14, on "Three Case Reports of Shoe-Dye Poisoning," and Dr. L. W. Brown, on "Intravenous Sterile Glycerin Drip in Postpartum Infections." The program was given by the staff of St. Mary's Hospital.

MONTANA

First Baby Clinic.—The state board of health announces that it will establish a permanent free baby clinic this summer in Butte. This will be, it is said, the first of its kind in the state. Dr. Hazel D. Bonness is in charge of the child welfare work in the state.

Personal.—Dr. Paul O. Neraal, Cut Bank, has been elected president of the newly formed Northern Montana Medical Association, which embraces the counties of Teton, Pondera, Liberty, Glacier, and Toole; Dr. Miles D. Riddle, Shelby, is the secretary-treasurer.——Dr. Owen C. Evans, Anaconda, has been appointed health officer of Deer Lodge County.

State Board Meeting.—At the recent annual meeting of the Montana State Board of Health, Dr. Louis H. Fligman, Helena, was elected president; Dr. Byron L. Pampel, Livingston, vice president for the next year, and Dr. William F. Cogswell was reelected executive secretary for a term of four years. In view of the prevalence of virulent smallpox in neighboring states, an order was issued requiring all employees of the board to be vaccinated against smallpox unless they had been vaccinated within the last five years.

NEW JERSEY

Child Guidance in Newark Schools.—A department of child guidance is being organized in the public schools of Newark. There will be a child guidance clinic, which, according to the *Mental Hygiene Bulletin*, will devote most of the time to kindergarten children; but there will be a service for older children who are referred to it. Dr. Bruce B. Robinson, since 1925 assistant director of the Cleveland Child Guidance Clinic, has been appointed director by the board of education. There will be also a chief of social service, a chief psychologist, adequate clerical assistance, and, during the rest of this year, an assistant psychologist and two assistant social workers. The state law requires the examination of certain children who are retarded in school as well as those referred to special classes, and those referred to schools as "incorrigibles." The work will probably develop along visiting-teacher lines, and the children studied will be followed up from year to year.

NEW YORK

New Law for Preventing Rabies.—The governor has signed the Lattin bill; now when the state commissioner of health certifies to a local health officer that rabies is present among dogs in his community, it shall be the duty of the health officer to give public notice, whereupon it shall be unlawful for any dog to be at large unless muzzled until the state commissioner certifies that rabies no longer exists; thus it becomes the duty of all law enforcing officers to cause any dog found at large and not muzzled to be confined, or, if that is not practicable, to be killed; any person killing a dog not muzzled which is known to have bitten a person or animal shall not be held liable for damages, but must report the facts to the local health officer.

Hospital News.—The Mary Immaculate Hospital, Jamaica, L. I., has let contracts amounting to $1,250,000 for new buildings; the hospital eventually will have a bed capacity of 600. ——The annual benefit for the tuberculous at Northwood Sanatorium, Saranac Lake, was given at the Manhattan Opera House, New York, April 18. The sanatorium, founded in 1920, has accommodations for twenty-two patients; among the directors are Dr. James A. Miller, Dr. Edward R. Baldwin and Dr. Joseph Brettauer, Saranac Lake; the secretary is Dr. Edgar Mayer, also of Saranac Lake.——The second annual conference of the Hospital Association of New York State will be at the St. George Hotel, Brooklyn, May 27-28; among others, Dr. William A. Jewett of the Kings County Medical Society will discuss "Medical Aspect of the Nursing Situation;" Mr. George F. Sauer, superintendent, Lenox Hill Hospital, New York, "Medical or Nonmedical Anesthetists?" The subject for the afternoon session, May 28, will be "Hospital Care of the Industrial Injured in a General Hospital."

New York City

Research Fellowship.—The Montefiore Hospital for Chronic Diseases announces the establishment of the Hilda Stich Stroock Research Fellowship, with an honorarium of $1,200 a year. The fellowship may be taken in the medical, neurologic, tuberculosis or cancer divisions. Applications should be sent to the medical director of the hospital, Gun Hill Road, New York City, with a brief account of previous training, letters of recommendation, and a general plan of the work contemplated.

Society News.—Dr. John M. Wheeler has been elected president of the New York Ophthalmological Society for 1926; Dr. Francis W. Shine, vice president, and Dr. John H. Dunnington, secretary-treasurer.——Dr. Howard V. Merrell was elected president of the Flatbush Medical Society, April 9, succeeding Dr. Stanley B. Thomas; Dr. Harry H. Patrie was elected secretary.——About a thousand persons attended the sixth annual banquet, April 10, of the Italian Medical Society of Brooklyn, under the presidency of Dr. Paul C. Fleri; the vice president, Dr. Francis Caponegro, was toastmaster. Among the speakers were Dr. O. Paul Humpstone, president, Kings County Medical Society; Dr. Giuseppe Previtali, president, Associated Italian Physicians in America; Dr. Walter A. Sherwood, president, Associated Physicians of Long Island, and Dr. John S. Read, of the Long Island College Hospital.——Dr. George de Schweinitz, Philadelphia, formerly president of the American Medical Association, was invited to take part in the discussion at the stated meeting of the New York Academy of Medicine, April 15, when Dr. Walter D. Sheldon, Mayo Clinic, Rochester, Minn., spoke on "The Diagnostic Significance of Visual Field Changes in the Localization of Brain Tumor," and Dr. Ward A. Holden on "Papilledema and Papillitis."

NORTH CAROLINA

Superintendent Appointed.—Dr. John Donnelly, Charlotte, has been appointed superintendent of the new Mecklenburg County Tuberculosis Sanatorium, which will open, June 1. Dr. Donnelly served during the World War with the tuberculosis unit of the eightieth division, and for years has been in charge of the tuberculosis work of Charlotte and Mecklenburg county.

Hospital News.—Dr. Lester A. Crowell, Lincolnton, has been made president of the new Caldwell Hospital Company. The company has secured the property of the former Lincolnton Hospital, which will be remodeled and enlarged. Dr. Robert W. Petrie, Charlotte, secretary, will assume the direction of the hospital about June 1; among the directors are Drs. William F. Elliott and Gordon B. Crowell.

PENNSYLVANIA

Society News.—Dr. Arthur C. Morgan, professor of applied therapeutics, Temple University Medical School, Philadelphia, addressed the Lancaster City and County Medical Society, April 7, on "Symptoms of Diagnostic Value."——Dr. Elmer H. Funk, assistant professor of medicine, Jefferson Medical College, addressed the Berks County Medical Society, April 13, on "The Diagnosis and Treatment of Pneumonia."——The Westmoreland County Medical Society will hold its fifth annual clinic and banquet at the Country Club, Greensburg, May 6, to which the adjacent county medical societies are cordially invited. The clinics will be held by Drs. Elliott P. Joslin and Frank H. Lahey, both of Boston.——Dr. Joseph V. Klauder addressed the Lehigh County Medical Society, Allentown, March 9, on "Common Skin Diseases."

Personal.—Mr. Joseph Noh, a member of the faculty of Purdue University, Lafayette, Ind., has been appointed full-time secretary of the Pennsylvania Pharmaceutical Association with headquarters in Harrisburg.——Dr. Rush E. Castelaw has resigned as medical superintendent of the Williamsport Hospital, Williamsport.——Dr. Mahlon B. Ballard, Troy, has been appointed county medical director for Bradford County.——Dr. John W. Wright, Erie, resigned April 1, as attending physician to State Tuberculosis Clinic no. 3, after having been connected with the state department of health in this capacity for nineteen years; Dr. Katharine H. Law Wright has been appointed as his successor.——Dr. Herbert H. Holderman has been appointed surgeon-in-chief of the Locust Mountain Hospital at Shenandoah, which will be opened soon. The hospital was started under private auspices, but during the past year has been taken over by the state welfare department. Dr. Holderman is a native of Shenandoah.

Philadelphia

Personal.—Dr. Myron A. Zacks has been appointed chief of the department of otolaryngology at the Northwestern General Hospital.——A testimonial dinner was tendered Dr. Albert P. Brubaker at the Adelphi Hotel, March 27, by the alumni of the Philadelphia College of Dental Surgery and the Dental Department of Temple University, of which Dr. Brubaker has been professor of physiology for more than twenty years.

Society News.—Francis G. Benedict, Sc.D., director of the nutrition laboratory, Carnegie Institution of Washington, Boston, addressed the Physiological Society of Philadelphia, March 15, on "Perspiratio Insensibilis: Its Significance in Physiology and Pathology and Its Relationship to Skin Temperature and Heat Loss."——Dr. Charles G. Kerley, New York, addressed the Philadelphia Pediatric Society, April 13, on "Roentgen-Ray Demonstration of Gastro-Intestinal Abnormalities, with Symptomatology and Treatment."

Philadelphia County Medical Society.—A drive for an endowment fund of $250,000 will be started by this society within a few weeks, the president, Dr. Moses Behrend, announces, to provide for an adequate library and postgraduate courses for members, one of which will be for instruction in making periodic physical examinations, and another to bring up to date the knowledge of practitioners who have been out of schools for years. The new building of the society was formally dedicated, April 20-21.

RHODE ISLAND

Health at Providence.—Telegraphic reports to the department of commerce from sixty-eight cities with a total population of twenty-nine million, for the week ending April 3, shows that the highest mortality rate (30.4) was in Providence, and that the rate for the group of cities was 17.7. The mortality rate for Providence for the corresponding week last year was 16, and for the group as a whole, 14.7.

SOUTH CAROLINA

University News.—A campaign is in progress to raise an endowment fund for the Medical College of the State of South Carolina under the chairmanship of Dr. D. Lesesne Smith, Spartanburg. An organization will be formed in every county in the state. Letters have been sent to every graduate of the state medical school, requesting their cooperation.

Collaborating Epidemiologists.—The secretary of the state board of health announces that fourteen collaborating epidemiologists were appointed recently to assist the U. S. Public Health Service and the state health department in securing accurate reports of communicable diseases in South Carolina. The appointees are members of county health units; local physicians will report communicable diseases to them in their districts; they will in turn forward a summary to the state board of health, which will then forward a summary to the U. S. Public Health Service. Among the collaborating epidemiologists appointed are:

Dr. Erin E. Epting, Anderson.
Dr. Leon Banov, Charleston.
Dr. Wallace L. Poole, Gaffney.
Dr. Archie B. Hooton, Darlington.
Dr. Henry G. Callison, Newberry.
Dr. Grover C. Bolin, Orangeburg.

SOUTH DAKOTA

Meeting of Health Officers.—The superintendent of the state board of health, Dr. John F. D. Cook, has called a meeting of all county and city health officers of the state to be held at Aberdeen, May 18, preceding the annual meeting of the state medical association in that city; among the speakers will be Dr. George M. Boteler, director of the Brown County Health Department, whose subject will be "County and City Organization"; Dr. Merrill W. Pangburn, director, Pennington County Health Department, "Goiter Survey"; Dr. Rodell C. Warne, superintendent, Davison County Board of Health, "Communicable Disease Control"; Dr. Francis E. Bouza, superintendent, Mellette County Board of Health, "Moses, the Premier Health Officer," and Dr. Joseph C. Waterman, superintendent, Gregory County Board of Health, "Organization of County Health Officers."

UTAH

Society News.—A ten story medical arts building for the exclusive use of the medical and allied professions is being erected at Salt Lake City.——The Salt Lake County Medical Society devoted its February meeting to medicomilitary matters; the program for the March meeting of the society was arranged by the Utah Ophthalmological Society.

State Medical Meeting.—The Utah State Medical Association will hold its annual meeting at Salt Lake City, May 6-8. The house of delegates will meet each day at 12 o'clock; the banquet will be at 8 o'clock at the Hotel Utah, Friday evening. Among the visiting speakers will be Dr. Harry Gideon Wells, professor of pathology and chairman of the department, University of Chicago, and Dr. Anton J. Carlson, professor of physiology and chairman of the department, University of Chicago.

GENERAL

Examination in Otolaryngology.—In addition to the examination held at Dallas, Texas, April 19, and San Francisco, April 27, the American Board of Otolaryngology will hold an examination at the Royal Victoria Hospital, Montreal, June 1. Information may be secured from the secretary, Dr. Hanau W. Loeb, 1402 South Grand Boulevard, St. Louis.

Automobile Fatalities.—During the four weeks ending March 27, the total number of automobile fatalities in seventy-nine large cities in the United States reported to the department of commerce was 348. Fifteen of the cities showed no automobile fatalities during this period, while New Bedford and Waterbury have reported no fatalities during the last twelve weeks.

Society News.—The Central Tri-State Medical Association will meet in Huntington, W. Va., May 6; Dr. George W. Crile, Cleveland, will speak on "Certain Problems in the Treatment of Diseases of the Thyroid Gland with Special Reference to Hyperthyroidism"; Dr. John A. Kolmer, Philadelphia, on "The Pathology and Immunity of Syphilis in Relation to Serum Diagnosis and Treatment"; Dr. Stewart R. Roberts, Atlanta, "The Heart Muscle," and Dr. Hugh Cabot, Ann Arbor, Mich., "The Present Status of the Treatment of Prostatic Obstruction."

Study of Tumors of Lymph Nodes.—The American Association of Pathologists and Bacteriologists has inaugurated a "registry" for the study of primary tumors of the lymphatic system, and has appointed a commission comprising Dr. James Ewing, New York, and Dr. Frank B. Mallory, Boston. Major James F. Coupal, Medical Corps, U. S. Army, will collect gross and microscopic material, histories and other information. The cases will be referred to various investigators for opinion, and, ultimately, collated. The association has decided to announce each year a field of work that would be especially welcome on the program of the following year; at the annual meeting, April 2, Dr. Hans Zinsser, Boston, was elected president; Dr. James W. Jobling, New York, vice president; Dr. Frank B. Mallory, Boston, treasurer, and Dr. Howard T. Karsner, secretary, 2109 Adelbert Road, Cleveland.

Conference on Medicinal Wines.—Gen. Lincoln C. Andrews, federal prohibition administrator, held a conference, April 8, with about thirty-five representatives of organizations interested in the distribution of medicinal wines. The conference was called by Mr. H. K. Weeks, recently appointed federal supervisor of wine control, and was the first meeting to be held by prohibition officers with representatives of manufacturers and distributors of medicinal wines. Among others, Dr. William C. Woodward, Chicago, representing the American Medical Association, attended the conference. Although treasury department officers would not disclose the prospective plans, it is understood that General Andrews may consider lifting the present regulations which prohibit the importation of wines for medicinal purposes, but that no further extension of existing regulations in the issuing of wine prescriptions will be allowed.

Information Wanted on Effects of Gas Warfare.—The board of physicians recently appointed by the director of the U. S. Veterans' Bureau to study the residual effects of war gases (THE JOURNAL, March 20, p. 882) desires the cooperation of physicians. The board will welcome first-hand opinions and reprints of any article which a physician may have written on the subject; also contributions from personal experience. Information is particularly desired on the following points:

1. Does any war gassing received in action result in disability which is relatively lasting and permanent?
2. Does it cause lasting anatomic (pathologic) changes, with or without disturbance of function (symptoms and disability)?
3. What organs or systems may thus be permanently affected or disturbed?
4. What symptomatology may exist under these circumstances?
5. If war gassing does produce relatively permanent effects, may a similar condition or conditions be produced by other agencies (diseases such as influenza, tuberculosis or effort syndrome)?

American Health Congress.—Among the joint sessions that will characterize the American Health Congress, Atlantic City, May 17-22, will be a joint session of the American Child Health Association, the American Public Health Association, the National Organization for Public Health Nursing and Conference for State and Provincial Health Authorities of North America, which will discuss public health administration of communities. Three plans for the health administration of cities will be described by men who have developed them; a fourth health plan for the county health organization will be presented. Many other member organizations of the National Health Council will participate in the congress, and in addition to sectional medical and joint sessions there will be four general sessions. Some of the speakers will be Sir Arthur Newsholme, "Relative Values in Public Health Work"; Prof. C.-E. A. Winslow, "Whose Responsibility Is Public Health?" Dr. Ray Lyman Wilbur, "Is Public Health Improving the Race?" and George E. Vincent, Ph.D., and Dr. Alice Hamilton, "International Health Work." Mr. Herbert Hoover will give the opening address for the American Child Health Association.

FOREIGN

American Hospitals Closed.—It is reported from London that two large American hospitals in South China have been closed on account of activities of the "Red labor unions". The Canton Hospital, operated by the American Presbyterian Mission, was blockaded by the unions, and food and electric supplies shut off. The American Hospital at Wuchow was also compelled to close; its medical staff left on board an American gunboat.

Health in Palestine.—There were only two deaths from malaria last year in Jerusalem, against 113 deaths in the last nine months of the preceding year. The League of Nations Non-Partisan Association says that pilgrims to Palestine must undergo inspection for malaria before entering the Holy Land, and that a malaria quarantine has been ordered on the Hedjaz and Sinai railways because of the crowds of Moslems, Christians and Jews entering and leaving Palestine annually. The decreased malaria infection has been brought about partly through the draining of swamps and the conversion of coastal plains into lands suitable for cultivation, partly by a war on mosquitoes for six years, which has prevented fresh infections in all of the towns except Haifa, and partly by constant surveillance of the children in the public schools. Trachoma has been reduced among Jewish school children from 35.4 per cent in 1920 to 10.5 per cent in 1925. Smallpox is well under control. Typhus is only sporadic; bubonic plague has been greatly reduced by the rat-proofing of houses and other measures, and no case was reported in Palestine in 1925. Measles, tuberculosis and chickenpox, however, were serious health problems: there were 1,232 deaths from measles among 6,936 cases. Other diseases noted to a great extent in the latest epidemiologic report of the League of Nations are influenza, epidemic ulcer, leprosy and pneumonia. The birth rate noted was 51.3 per thousand, or an increase of about 4 per cent over the previous year. The infant mortality was 184.8 per thousand births. The settled population of Palestine is estimated in the report as 681,245, of which number 95,000 are Jews, 505,000 Moslems and 74,000 Christians; about 103,331 Bedouins wander here and there. The league obtained most of its facts from the annual report of the department of health of Palestine.

Deaths in Other Countries

Dr. **A. Haegler,** Basel, ex-president of the Swiss Medical Association, aged 62, of cancer of the rectum.——Dr. **F. Dimmer,** professor of ophthalmology, Vienna, the pioneer in photography of the fundus of the eye, and author of a classic work on the ophthalmoscope in 1921, aged 71.——Dr. **M. A. van Keerberghen,** Brussels, one of the founders of the Brabant Medical Society, killed in an automobile accident, aged 70.——Dr. **W. Permewan,** formerly lecturer in laryngology, University of Liverpool, March 9, aged 60.——Dr. **G. Gradenigo,** professor of otorhinolaryngology, Naples, founder and editor of the *Archivio di Otologia, Rinalogia e Laringologia,* now in its thirty-seventh volume, and president of the Italian specialist society.——Dr. **J. Kyrle,** professor of dermatology and syphilis, Vienna, editor of the *Wiener klinische Wochenschrift.*——Dr. **P. Bunge,** emeritus professor of ophthalmology, Halle, aged 73.——Dr. **Zoege von Manteuffel,** emeritus professor of surgery, Dorpat.——Dr. **Tous y Biaggi,** editor of the *Revista Española de Medicina y Cirugia,* Barcelona.——Drs. **Maisel, Meiltscharski** and **Hirschfeld,** connected with a private clinic at Moscow, were shot by a former patient because they had been unable to cure him. The assailant killed himself also.——The death is reported of Dr. **Levy,** assistant professor of physiology, Turin. She was with a skiing party overwhelmed by an avalanche.

Foreign Letters

LONDON

(From Our Regular Correspondent)

March 27, 1926.

The Problem of the Intoxicated Motor Driver

The "True Temperance Scientific Committee," which consists of a number of physicians and others interested in the problem of alcohol who take up an antiprohibition attitude, has issued a useful pamphlet on the difficult current question of the intoxicated motor driver. The committee insists that the word "drunk" is not enough to signify an offense and thinks that legislators should abandon its use. "Simple drunkenness" (to adopt the phraseology of the licensing statistics) should not be a legal offense at all; it is not the drunkenness that matters to the law; it is the nuisance or harm to the public committed by a person in a state of absence of self-control with which the law is properly concerned. If he is incapable on the public highway, it is the business of the police to look after him not because of his drunkenness but because of incapacity and the consequent danger to himself, and possibly to others. If he is disorderly, he must be taken in hand for the public nuisance of his disorderliness, whether due to drunkenness or another cause. If he is steering a car in a zigzag course along the highway, it is his loss of controlling power over a dangerous vehicle on which the attention of the law should be fixed. When the criminal justice bill was going through the house of commons, an effort was made to get rid of the word "drunk." The effort failed, because the substituted words proposed were "in a state of intoxication whereby his capacity to act is impaired." Those words, the committee considers, were not the best. The committee would not really carry the matter further than the present dual "drunk and incapable." It is not enough to say "any person who is drunk in charge on any highway or other public place of any mechanically propelled vehicle," or who is "in a state of intoxication whereby his capacity to act is impaired"; the act should read, "any person who is in charge, etc., while in a condition which prevents him from exercising adequate control of the vehicle," or words to a like effect. Then the evidence would properly be concentrated on the signs of the lack or presence of control, and such evidence would be apparently easier and more satisfactory from any witness, and would be to the point. Obviously, it would mean setting a higher and different standard of sobriety for motorists as compared with pedestrians; but that is only right: a collision with a pedestrian has not the consequence of a collision with a motor car. Meanwhile, and until the law is made more explicit, it should be possible for magistrates to give varying meanings to the word "drunk" according to the varying collocation. A word in a statute is interpreted with reference to its subject matter; it should not be an undue extension of that principle to interpret the word "drunk" (admittedly an often vague term) in accordance with the matter of the charge, and give it a different meaning when used of a person in charge of a motor car from that applicable to a pedestrian or to a mere passenger in a motor car. It is suggested that a statute should condemn a person in charge of a motor car "while in a condition which prevents him from exercising adequate control"; and this phrase should apply to others than those whose condition is the result of too much alcohol. A man may be in such a condition from various causes—nervous disease, for example. But the result on the victim of his bad driving is the same. Then, however, the innocent sufferer would be punished. Punishment, as we view it today, is intended to be remedial, not vindictive, and here is particularly a case in which what the public wants is a remedy against the danger of bad driving. The most direct method of obtaining this protection is not by fines and imprisonment but by stopping a man liable to be unfit to drive from driving. The taking away or suspension of the license is therefore the best remedy. That can be applied without injustice to the man whose helpless condition arises from disease not of his own making as well as to him whose incapacity comes from drink. One has no more right to drive than the other.

The Proposed Separate Medical Register for the Irish Free State

The *Irish Times* publishes proposals which were submitted to a subcommittee of physicians last December by the president of the Royal College of Surgeons in Ireland, with a view to a settlement of the controversy concerning the establishment of a separate medical register and the consequent isolation of Free State physicians from the general medical council (described in previous letters). The proposals, which were submitted afterward to the Free State government in a modified form, were as follows: "In order to give effect to the wishes of the Saorstat government to control the registration and the discipline of medical practitioners in the Saorstat, and at the same time to preserve the educational advantages and the world-wide status given by the partnership in the general medical council, the following procedure is suggested: 1. Renew the partnership in the general medical council until such times as either the government of the Saorstat or of England may apply for a termination of such partnership. 2. (*a*) The government of the Saorstat to set up a medical register for the Saorstat and a medical council to supervise and control such register; (*b*) direct the Saorstat medical council that any person of good repute who holds a medical degree or qualification from a university or college, etc., which is recognized by the Saorstat medical council shall be eligible for entry on the Saorstat medical register; (*c*) direct the Saorstat medical council that, in addition to the universities and colleges, etc., which may be recognized by the Saorstat medical council, any university or college, etc., which may be recognized from time to time by the general medical council shall be recognized by the Saorstat medical council; (*d*) any citizen of the Saorstat who may wish to practice in the Saorstat must have his name on the Saorstat medical register; (*e*) any person who is not a citizen of the Saorstat shall be debarred from practicing in the Saorstat unless his name is on the Saorstat medical register or on some section of the general medical register." When the amended proposals were submitted to Mr. Cosgrave and Mr. P. McGilligan, minister for industry and commerce, they were received sympathetically, but long delays have followed, and the present position is obscure. The government has passed an act extending the existing arrangements with the general medical council until August 1, and it is hoped that before that date a permanent settlement will have been reached. For the moment, negotiations between the physicians and the government seem to be at a standstill.

Local Insurance and Emigration

The question raised in the house of commons last year as to whether schemes of social insurance act as a deterrent to emigration has been investigated by an interdepartment committee. The report presented to the secretary for the dominions gives the two chief causes which tend at present to discourage emigration as bad trade conditions and the restrictions placed by the dominion authorities on the granting of assisted passages. The cumulative effect of the various schemes of social insurance is considered to be a subsidiary cause. "These schemes," says the report, "have an effect in discouraging migration, both directly as a result of the sense of security they induce and indirectly in that they raise the

standards of living and so counteract to an appreciable extent the attraction of the life of independence offered in the dominions." The national health insurance scheme is not considered to act perceptibly as a check on migration. Unemployment insurance and the comparatively recent extension of outdoor poor law relief to able-bodied persons are considered to discourage migration to an appreciable extent at precisely those ages when, other thing being equal, it might be expected that the opportunities of oversea life would prove most attractive. Old age pensions are not regarded as having much effect on migration, and the effect of the widows' and orphans' pension scheme, it is stated, must largely be a matter of conjecture at this early stage of its operation. It is considered, however, that this scheme will have some influence in the case of married men, who will naturally take into account the loss, on migration, of the provision made for dependents under the scheme, and that the scheme will be a material factor in the case of widows contemplating migration. The view is taken that when openings in the dominions are more varied and attractive, when bolder and more comprehensive schemes of settlement are undertaken, and if the present restrictions on assisted migration can be modified and more opportunities provided for the oversea settlement of families and women, social insurance schemes will have comparatively little effect. The committee recommends that the general question of the standardization of schemes of social insurance throughout the empire should be considered by the imperial conference; that the attention of the committee on the administration of the unemployment insurance acts should be drawn to the attitude toward migration of persons approaching 18 and for a few years thereafter; that a year's pension should be paid on migration to persons drawing pensions under the widows' and orphans' and old age contributory pensions schemes; that the cost of medical examination of applicants for assisted passages who are insured under the national health insurance scheme should be paid under that scheme; that greater publicity should be given to the social insurance schemes that exist in the dominions, and that extended facilities should be provided for training juveniles in the elements of rural occupations.

JAPAN

(From Our Regular Correspondent)

March 16, 1926.

A Rare Medical Book

In the earthquake in Tokyo in 1923, a rare Dutch medical book, Kulm's "Tabula Anatomica," was destroyed. The old volume was the property of Prof. Dr. Matao Nagayo, director and professor in the Tokyo Imperial University. Nearly 150 years ago, in the Tokugawa era, the book was brought to Japan by a Dutch missionary. At that time people here knew very little about European medical science. It was therefore quite an epoch-making event in the medical history of Japan when Dr. Gempaku Sugita and his friends, earnest students of Dutch medical science, went to the postmortem of a criminal held at Kozuka Common, one of the execution grounds, in the suburbs of Edo (now Tokyo) and there studied anatomy, marveling at the exactness of the illustrations in the foreign book. Dr. Gempaku's account of his difficulty in translating the book, with his poor knowledge of Dutch, is related in his autobiography entitled "Rangaku Kotohajime" (Pioneering in Dutch Science). His "Kaibo Shinsho" (New Anatomy) was the first translation in Japanese. A century elapsed, and Dr. Sensai Nagayo, father of Professor Nagayo, happened to get possession of the original book of "Kaibo Shinsho." He valued it more highly than any other book in his library and would not part with it, though he sent it to an exhibition in Dresden and another time displayed it in the Far East Tropical Medicine Congress held in Java. Great was his son's sorrow when the heirloom was burned in the earthquake disaster. But his joy was even greater when he received another copy of "Tabula Anatomica," the gift of the Dutch medical scholar M. Van Roemer, ex-naval surgeon, of Java. He has written to Professor Nagayo that he was unable to attend the Far East Tropical Medicine Congress held in Japan last autumn, and that he sent the book to promote friendly relations between Japan and his country. In his letter of thanks the professor said that his joy was as if one's dead child had come to life again. He took the volume to the annual memorial service of dead medical sages held at Kozuka Common to show it to his friends. It is reported that after consulting with Drs. Kitasato and Miyakawa he has decided to donate the invaluable book, rare even in Holland, to the new library of the Tokyo Imperial University, now in course of reconstruction.

Lepers

According to the census taken Nov. 16, 1925, by order of the department of home affairs, the number of lepers in Japan amounts to 15,400. This shows a decrease of 861 compared with the investigation of March, 1919.

Menstruation of Students

Dr. Takao Hosaka, following an investigation of about 100 healthy students in the Tokyo Girls' Dental College, reports that the average age of the first menses is about 14½ years. About 17 per cent of them had no knowledge of menstruation before its onset in themselves. Some 60 per cent had been told about it by teachers or friends, and about 13 per cent, by their mothers or elder sisters. Their first experiences of it aroused various emotions: "wonder" and "terror," accompanied by "uneasiness"; though about 8 per cent were pleased that they had grown to adulthood. About 7 per cent thought nothing of it in particular. The average course is about five days; in some cases four days, and in others, three days. In only three girls was the duration more than a week. As to the period between menses, forty-two girls are of "retrogressive nature" (twenty-eight days), while thirty-nine are of "progressive nature" (more than thirty days). More than half of the girls complained of "uneasiness" in the lower abdomen; about a quarter of them of "pain" in the lower abdomen or loin; sixteen, of "weariness," "drowsiness" of "poor appetite"; and three felt refreshed.

Japanese Practitioners in North Sakhalin and Siberia

At the Moskva meeting of the oil field committee, concerned with the North Sakhalin treaties, it was decided that half of the laborers in the oil fields of North Sakhalin should be Russians and half Japanese, and that Japanese physicians might be engaged to attend the laborers. It was also agreed that resident Russians who are not oil field laborers may consult Japanese physicians, and that medical certificates and necropsy certificates of these physicians will be acknowledged there. Attending of Russians who are not oil field laborers will be subject to certain regulations. The arrangements are said to have been made by Rear Admiral Kumagawa of the Japanese committee, and one member of the Russian committee. Japanese physicians were permitted to practice in Siberia almost without restrictions toward the end of the monarchical days, but under the soviet régime this is prohibited. Many wish to regain the former privilege, and one of the Japanese authorities expresses his private opinion that a permanent treaty of reciprocity between the two governments should cover this matter.

Improvement of the Electrocardiogram

Mr. Toyoya Yasuhara, director of the clinical laboratory in Osaka, is one of several who have been devoting them-

selves to improving the electrocardiograph. The merits of Mr. Yasuhara's newly designed apparatus are said to be that it is simple enough to be handled even by a nurse, and that it can draw curves on white paper in Japanese ink, rendering the trouble of photographing unnecessary.

Tattooing of Female Ainus

Dr. Kamataro Nakajima of the Medical College of the Hokkaido Imperial University has made investigations of the tattooing of Ainu women in the tribe called Kamikawa Ainu. This tribe, now settled in Chikabumi, Asahikawa, Hokkaido, consists of sixty houses and more than 280 natives. Dr. Nakajima found fifty-four tattooed women among 148 female Ainus. The Ainus had a superstition that women had much bad blood in their bodies and had to be tattooed in order to be bled and made strong and healthy. They also practiced tattooing as a form of therapeutics and preventive medicine. Adopting the same method as the Melanesian race, the tattooing was begun around the mouth when a girl became 9 years of age. It was later extended as far as each forearm. At last it was completed on the back of each hand by the time she attained her marriageable age of 15 or 16 years. Parents would force such a painful practice on their daughter, for a girl whose tattooing was complete was regarded as qualified for marriage as an adult. Moreover, it may be presumed that with them tattooing was a symbol of beauty and exerted a sexual attraction. Now nobody below the age of 28 is found tattooed. The custom has fallen into disuse since they have come in contact with the Yamato race (pure Japanese)

RIO DE JANEIRO

(From Our Regular Correspondent)

March 15, 1926.

Public Health Congress

The third Brazilian Congress of Hygiene will be opened at São Paulo, September 28. Preparations are so far advanced that the meeting will surely be as successful as those held at Rio de Janeiro and Bello Horizonte. The following subjects have been suggested for discussion by different agencies which will be represented at the congress; such as the national department of public health, the Rockefeller Foundation, local health departments, Oswaldo Cruz Institute, and the Brazilian Public Health Society: epidemiologic rôle of flies; water purification; home prevention of malaria; worm infestation index; epidemiology and prophylaxis of malaria in Brazil; permanent organization of local health departments; epidemiology and prophylaxis of typhoid fever; prevention of leprosy; effect of sanitary works on public health; work accomplished in Brazil in protecting milk supplies; infant hygiene.

Myopathy with Heart Changes

Dr. Pires recently exhibited before the Society of Neurology, Psychiatry and Legal Medicine a patient with atrophy of the muscles in the chest, shoulder and arm, as well as in the abdomen and lumbosacral region. Lordosis was quite marked. The flattening of the sternum caused a sort of shoemaker's chest. The disease was undoubtedly a form of Erb's juvenile type. The personal and familial history proved immaterial, the condition dating from as far back as the patient could remember. A study of the cardiovascular system by Dr. P. da Cunha showed interference with the deep thoracic blood flow; upper costal breathing with the aid of auxiliary muscles; displacement of the heart toward the abdominal cavity; enormous enlargement of the heart; diaphragm, almost motionless. The myopathy has apparently entailed changes in the myocardium. A number of similar cases have already been confirmed in the necropsy, abroad by Marinesco and A. Leri and here by da Cunha himself, who described several in his professorial thesis.

Honors to Couto

As stated in a previous letter, Dr. Couto, the president of the National Academy of Medicine and a professor in the Rio de Janeiro medical school, is now touring Europe. The lecture he delivered before the Berlin Medical Society was attended by high government officials as well as the most prominent German scientists. His lecture dealt with cardiac changes noted during the treatment of malaria, yellow fever, beriberi and Chagas' disease. Even the newspapers commented favorably on the visit. In his presentation speech, Geheimrat Goldscheider recalled that Couto had been one of the first in starting, after the war, a subscription to enable German scientists to continue their research work. During his stay in Germany, Couto will be a guest of the department of foreign affairs. The president of the republic, Marshal von Hindenburg, received the Brazilian professor at a private audience.

Duodenal Drainage

Prof. O. de Oliveira described before the Academy of Medicine some experiments and clinical trials of duodenal drainage as developed by Einhorn, Meltzer and Lyon, and now set forth in a thesis by Dr. Thibau, Jr., of Oliveira's clinic. The experiments were made under Oliveira's supervision by Thibau, with the assistance of Dr. Figueiredo Vasconcellos, chief of the laboratory. Thibau has improved the technic, and his suggestion as to the introduction of the tube by the nose obviates some difficulties so far encountered. As relates to diseases of the pancreas, Thibau's original experiments show the influence of splenic juice on the enzymatic potency of the duodenal content, thus confirming previous uncertain clinical data. According to Oliveira duodenal drainage is a great help in diagnosis, can solve many pathologic problems, and may render much assistance in treatment, especially in diseases of the gallbladder and gall ducts.

BERLIN

(From Our Regular Correspondent)

March 13, 1926.

The Physicians of Germany in 1925

In an article in the *Deutsche medizinische Wochenschrift*, the medical statistician Prinzing discusses the distribution of German physicians in 1925. It appears from the article that the number of physicians in Germany, inclusive of the Saar region, in 1925 was 41,650. According to the census of June 16, 1925, the population of Germany was 62,478,872, which would indicate 6.67 physicians to 10,000 inhabitants. This shows an increase over the record of 1901 of more than 33 per cent, and over that of 1913 of 30.5 per cent. For purposes of comparison, the relations of physicians to population are given for a number of pivotal years in table 1.

TABLE 1.—*Number of Physicians per Ten Thousand Inhabitants in Germany*

Years	No. of Physicians	Years	No. of Physicians
1901	4.92	1913	5.11
1905	5.08	1921	5.99
1911	5.02	1925	6.67

The absolute increase, as compared with 1921, was about 5,400. It cannot be ascertained exactly, since in the census of 1921 the ceded portions of Schleswig-Holstein and Upper Silesia were included, while the physicians of the Saar region were omitted.

Table 2 shows the number of physicians in the various German states in 1911 and in 1925. However, in some prov-

inces of Prussia there have been a good many changes. The Saar region is included in the Rhine province.

Leaving out of consideration the chief urban centers, the states with the highest percentage of physicians were, in 1925, Hesse-Nassau, Hesse, Baden and Waldeck, all of which have had, for many years, a large number of physicians. Hesse-Nassau, with its 2,400,000 population, has the large cities Frankfort-on-the-Main and Cassel, three important health resorts (Wiesbaden, Homburg, Ems) and the University of Marburg, in all of which there are many physicians. In the state of Hesse, 17.7 per cent of the physicians live in Giessen and Nauheim. In Baden, the number of physicians is increased by the two universities of Freiburg (im Breisgau) and Heidelberg and the health resort of Baden-Baden. Waldeck owes its high percentage of physicians to the health resort at Wildungen. In West Prussia-Posen, the large number of physicians is doubtless partly due to emigration from the ceded districts.

TABLE 2.—*Number of Physicians to Ten Thousand Inhabitants in the Various German States, Etc.*

	Number of Physicians to 10,000 Inhabitants		Percentage of Increase
	1911	1925	
East Prussia	3.39	4.42	30
Greater Berlin	10.00	13.40	22
Brandenburg	4.04	5.00	24
Pomerania	3.81	4.92	29
West Prussia-Posen	.....	7.51	..
Silesia	3.87	5.19	34
Saxony	4.55	5.86	29
Schleswig-Holstein	5.28	6.37	21
Hanover	4.01	6.05	23
Westphalia	3.75	5.14	37
Hesse-Nassau	7.14	8.54	20
Rhine Province	4.96	5.83	18
Hohenzollern	3.24	4.71	45
Prussia as a whole	4.97	6.48	30
Bavaria	5.31	7.03	32
Saxony	4.84	5.75	19
Wurttemberg	4.42	5.91	34
Baden	6.03	7.38	22
Thuringia	4.40	5.74	28
Hesse	5.95	7.94	33
Mecklenburg (the two states)	4.74	6.36	34
Oldenburg	3.61	4.80	33
Brunswick	5.64	6.95	23
Anhalt	4.38	5.55	27
Lippe	3.70	5.83	58
Waldeck	8.91	7.59	..
Hamburg	7.45	10.38	39
Bremen	7.63	9.75	28
Lübeck	7.12	9.96	40

TABLE 3.—*The Number of Physicians in Cities of Various Size in 1925*

Cities, Towns and Communes	Number of Inhabitants	Actual Number of Physicians	Number of Physicians per 10,000 Population (1925)	Number of Physicians per 10,000 Population (1911)
Communes, under 10,000 pop.	25,019,100	12,322	2.80	2.7
Cities, 10,000-20,000 pop.	3,529,586	2,543	7.20	6.4
Cities, 20,000-50,000 pop.	4,527,529	4,268	9.43	
Cities, 50,000-100,000 pop.	2,879,167	2,995	10.40	8.6
Cities (46) with more than 100,000 population	16,519,490	18,521	11.21	9.6
Germany as a whole	62,474,872	41,650	6.67	5.0

The variations in other parts of the country are due mainly to the mode of distribution of the population among the towns, large cities and rural districts. The Rhine Province and Westphalia, however, in spite of the great number of large and medium-sized cities, have a low percentage of physicians. This is due to the facts that in these states medical treatment is largely in the hands of physicians engaged by miners' unions, and that a large number of workmen are delegated to each physician. According to an enumeration in twenty-nine cities in the industrial district comprising portions of the Rhine Province and Westphalia in the report of the League of German Assistant Physicians, and covering a population of 2,700,000, there were 5.3 physicians to 10,000 inhabitants, whereas, in German cities with more than 10,000 inhabitants, the proportion of physicians was 10.32.

A comparison of the number of physicans in cities of various size, as recorded in 1925, is given in table 3.

The increase in the number of physicians in towns with less than 10,000 inhabitants furnishes evidence that the rural sections are better provided for than formerly. The old complaint that young physicians were reluctant to settle down in rural communities can no longer be advanced. If the new list of physicians is compared with the prewar list, it will be noted that there are now physicians in many rural communities in which there were none before the war.

Table 4 gives a comparative view of the number of physicians per 10,000 inhabitants in the eleven cities of Germany with more than 400,000 inhabitants, arranged in diminishing order of population.

TABLE 4.—*Number of Physicians per Ten Thousand Inhabitants in the Eleven Cities of Germany with More Than Four Hundred Thousand Population*

Cities in Diminishing Order of Population	1901	1911	1925
Greater Berlin	11.7	10.9	13.4
Hamburg	8.1	7.6	10.7
Cologne	9.5	10.5	10.2
Munich	14.1	16.5	22.0
Leipzig	9.9	8.8	8.3
Dresden	11.2	9.4	10.8
Breslau	12.7	11.6	14.0
Essen	6.3	4.7	4.8
Frankfort-on-the-Main	12.0	11.6	14.8
Düsseldorf	8.0	8.1	10.2
Hanover	11.5	10.4	9.6

The decrease shown in the proportion of physicians in a few cities is, in a sense, only apparent, and is due to the fact that suburbs with fewer physicians than the more central districts have been annexed. The proportion of physicians in Munich is especially high, owing to the large number of physicians on the medical faculty of the University of Munich. That factor plays a bigger part in a city of the size of Munich than it does in Greater Berlin, which is almost six times as large. The proportion of physicians in Essen is small because, among the 220 resident physicians, there are forty-one who are engaged by miners' unions.

Health Week

With a view to enlighten the population of Germany on hygienic subjects, a health week has been set apart which will be celebrated throughout the country. The campaign will be carried on by means of lectures, exhibits, motion pictures and the like, which will be aided by physicians and heads of health insurance societies. The preparations for the event will be in the hands of a large committee, of which Professor Hamel of the federal ministry of the interior will be chairman. Subcommittees have been appointed to serve in the several states. In Berlin, seventy-two public lectures, illustrated by lantern slides and motion pictures, will deal chiefly with the protection of juveniles, children and the unborn child. Outdoor entertainments will accentuate the importance of light, air and sunshine in securing and maintaining proper health conditions. The representations in the motion picture theaters will be specially designed to inculcate sound health principles. Special lectures for women on health questions of the hour will be provided. About fifty lectures and exhibits will be organized in industrial centers, dealing mainly with occupational hygiene and care of the health. The labor unions, the employers' associations, the medical profession, the motion picture corporations and the public welfare societies are working hand in hand to insure the success of the undertaking.

Marriages

VALCOULON LE MOYNE ELLICOTT to Miss Mary Purnell Gould, both of Baltimore, April 5.

LOUIS WILLIAM PERMAN, New York, to Miss Clara Lillian Wolff of Brooklyn, March 27.

ARTHUR H. BURLESON to Miss Kittie Walkinshaw, both of Olivet, Mich., February 7.

Deaths

Horace John Howk ✠ Mount McGregor, N. Y.; University of Michigan Medical School, Ann Arbor, 1907; member of the American College of Physicians; past president of the Saratoga County Medical Society; instructor of clinical pathology at his alma mater, 1907-1908; lecturer at the Albany (N. Y.) Medical College; on the staff of the Loomis (N. Y.) Sanatorium, 1908-1911; physician in charge, Metropolitan Life Insurance Company Sanatorium, and on the staff of the Glens Falls (N. Y.) Hospital; aged 47; died, April 8, at the Johns Hopkins Hospital, Baltimore.

Amos Gale Straw, Manchester, N. H.; Medical School of Harvard University, Boston, 1890; member of the Massachusetts Medical Society, the New Hampshire Medical Society and the Radiological Society of North America; served during the World War; local bacteriologist to the Manchester Board of Health; on the staffs of the Beacon Hill, Notre Dame and Balch hospitals; president of the staff of the Elliot Hospital and roentgen-ray expert to the U. S. Veterans' Hospital, no. 95, Northampton, Mass.; aged 61; died, March 13.

Max Kahn ✠ New York; Cornell University Medical College, New York, 1910; associate professor of biological chemistry, Columbia University College of Physicians and Surgeons; chief of the department of metabolism, Israel Zion Hospital, Brooklyn; discoverer of "intarvin"; director of the laboratories and chief of the department of metabolism, Beth Israel Hospital, where he died, April 8, of heart disease, aged 39.

Harold Williams, New Bedford, Mass.; Medical School of Harvard University, Boston, 1878; member of the Massachusetts Medical Society; and the American Climatological and Clinical Association; emeritus professor of theory and practice of medicine, Tufts College Medical School, and formerly dean of Tufts College Medical and Dental schools; aged 72; died, April 3, at St. Augustine, Fla., of heart disease.

Jacob Gilbert Zern, Lehighton, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1868; member of the Medical Society of the State of Pennsylvania; Civil War veteran; past president of the Carbon County Medical Society; formerly postmaster of Weissport and member of the state legislature; aged 81; died, March 20, of senility.

Charles Edwin Donlan, Malden, Mass.; Medical School of Harvard University, Boston, 1898; formerly superintendent of the Boston Almshouse and Hospital, Long Island, and the Lowell (Mass.) Almshouse; at one time on the staff of St. John's Hospital, Lowell; Spanish-American War veteran; aged 52; died, March 30, at Miami, Fla.

Norman S. Campbell, Bark River, Mich.; Michigan College of Medicine and Surgery, 1902; member of the Michigan State Medical Society; president of the Delta County Medical Society; aged 46; died, February 23, at St. Francis Hospital, Escanaba, of septicemia, following burns received when his home was destroyed by fire.

Adams Bailey Howard ✠ Cleveland; Medical Department of the University of Wooster, Cleveland, 1892; member of the American Psychiatric Society; formerly superintendent of the Cuyahoga Falls Sanitarium and the Cleveland State Hospital; aged 66; died, April 1, of pneumonia.

George Ross, Richmond, Va.; University of Virginia Department of Medicine, Charlottesville, 1861; member of the Medical Society of Virginia; emeritus professor of obstetrics, Medical College of Virginia; Civil War veteran; aged 87; died in March, at Los Angeles.

Henry Reed Hopkins, Buffalo; University of Buffalo Department of Medicine, 1867; member of the Medical Society of the State of New York; emeritus professor of hygiene at his alma mater; aged 81; died, March 6, of embolism, myocarditis and arteriosclerosis.

Frederick B. Peabody ✠ Richmond, Maine; Medical School of Maine, Portland, 1900; aged 50; died, March 23, at St. Barnabas Hospital, Portland, of myocarditis, following an operation for suppurative arthritis of the hip, a complication which followed the mumps.

Julius Rosenstirn, New York; University of Wurzburg, Germany, 1872; formerly on the staff of the Mount Zion Hospital, San Francisco; at one time connected with the George Crocker Special Research Fund of Columbia University; aged 76; died, March 27.

Walter Frank Cimiotti, Union City, N. J.; Columbia University College of Physicians and Surgeons, New York, 1901; served during the World War; aged 48; died, March 28, at the Knickerbocker Hospital, New York, of chronic nephritis and cerebral hemorrhage.

Herbert Othello Darnall, El Paso, Texas; Hahnemann Medical College and Hospital, Chicago, 1902; member of the State Medical Association of Texas; served during the World War; aged 48; died, in March, at the William Beaumont General Hospital.

Frederick Converse Eastman, Lees Summit, Mo.; College of Physicians and Surgeons, Keokuk, 1865; Bellevue Hospital Medical College, New York, 1883; Civil War veteran; aged 83; died, March 21, at Kansas City, Mo., of influenza and myocarditis.

George Henry Cobb ✠ South Orange, N. J.; Medical Department of Columbia College, New York, 1888; member of the Medical Society of the State of New York; president of the South Orange Board of Health; aged 63; died, April 5, of pneumonia.

John Winthrop Wright ✠ Bridgeport, Conn.; Medical Department of the University of the City of New York, 1880; formerly on the staffs of the Bridgeport and St. Vincent's hospitals; aged 73; died, February 10, following an operation for gallstones.

Theodore J. Gramm, Philadelphia; Hahnemann Medical College of Philadelphia, 1881; on the staff of the Women's Homeopathic Hospital; one of the founders and on the staff of the Belmont Hospital; aged 65; died, April 9, of angina pectoris.

Judson Albertus Ferree ✠ Columbus, Ohio; Cleveland-Pulte Medical College, Cleveland, 1901; University of Michigan Homeopathic Medical School, Ann Arbor, 1909; aged 52; died, March 29, at the Mount Carmel Hospital, of carcinoma.

Jesse Kersey Patrick ✠ West Chester, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1915; aged 37; died in March, at the Chester County Hospital, from the effects of illuminating gas, presumably self-administered.

Mary D. Rushmore, Palmyra, N. J.; Woman's Medical College of the New Infirmary for Women and Children, 1894; for many years surgeon to the New York Infirmary for Women and Children; aged 59; died, February 3.

Fred Bain Weaver, Hyde Park, N. Y.; Albany Medical College, 1898; member of the Medical Society of the State of New York; aged 50; died, March 16, at the Vassar Hospital, Poughkeepsie, of pneumococcus meningitis.

William Redwood Fisher, Swiftwater, Pa.; Medical Department of Columbia College, New York, 1867; formerly on the staffs of the Bellevue Hospital, New York and St. Mary's Hospital, Hoboken, N. J.; aged 82; died, March 28.

Charles W. Packard, Stratford, Conn.; New York Medical College, 1855; member of the New York Pathological Society; Civil War veteran; on the staff of St. Luke's Hospital, New York; aged 93; died, March 27, of myocarditis.

George A. Gilbert, Danbury, Conn.; Medical Department of Columbia College, New York, 1883; formerly on the staff of the Danbury Hospital; for ten years member of the board of education; aged 67; died, March 27.

Carll Casper Method, Elmhurst, Ill.; Northwestern University Medical School, Chicago, 1925; aged 27; died in March, of injuries received when the automobile in which he was driving was struck by a train.

Fred Stroble Westmoreland, Spartanburg, S. C.; Medical College of the State of South Carolina, Charleston, 1904; member of the South Carolina Medical Association; aged 46; died, March 5, at Vienna, Austria.

Charles Edward McClelland ✠ Columbus, Ohio; Ohio Medical University, Columbus, 1902; served during the World War; aged 47; died, March 27, at Rochester, Minn., following an operation on the spleen.

Llewellyn Powell Durrett, Louisville, Ky.; Louisville Medical College, 1892; member of the Kentucky State Medical Association; aged 58; died in March, at St. Anthony's Hospital, following an operation.

Roger Sherman Tracy, Ballard Vale, Mass.; Medical Department of Columbia University, New York, 1868; formerly member of the New York Department of Health; aged 84; died, March 6.

David Jones Hale, Terre Haute, Ind.; Rush Medical College, Chicago, 1905; member of the Indiana State Medical Society; aged 49; died, January 6, at the Union Hospital, of pernicious anemia.

John Schilling, Fort Wayne, Ind.; St. Louis College of Physicians and Surgeons, 1884; member of the Indiana State Medical Association; aged 62; died, March 20, of sclerosis of the spinal cord.

Carl Henry Breidenbach, Dayton, Ohio; Miami Medical College, Cincinnati, 1898; member of the Ohio State Medical Society; on the staff of the Miami Valley Hospital; aged 58; died, March 5.

George Allen Ross, Capac, Mich.; University of Michigan Medical School, Ann Arbor, 1909; member of the Michigan State Medical Society; aged 42; died in March, of pneumonia.

John M. Wilkins, Martinsville, Ill.; Vanderbilt University Medical Department, Nashville, 1878; Civil War veteran; aged 80; died, March 20, of valvular heart disease.

Alonzo Dexter Blagden, Sycamore, Ill.; Bennett Medical College, Chicago, 1886; member of the Illinois State Medical Society; aged 74; died, April 2, of heart disease.

John Van Reed Lyman ✠ Eau Claire, Wis.; Rush Medical College, Chicago, 1880; aged 68; died, March 31, at the Wauwatosa (Wis.) Sanitarium, of pneumonia.

Joseph McNeece, Morley, Mich.; Detroit College of Medicine and Surgery, 1889; member of the Michigan State Medical Society; aged 62; died, March 22.

August Henry Madsen, Scenic, Wash.; Rush Medical College, Chicago, 1925; aged 29; died, March 16, at Leavenworth, of pneumonia, following influenza.

William C. A. Leipold, Chicago; Hering Medical College, Chicago, 1896; aged 63; died, April 2, of intestinal obstruction due to peritoneal adhesions.

Pattie Alonzo Moore, Oakton, Ky.; University of Tennessee College of Medicine, Memphis, 1901; aged 55; died, March 8, of carcinoma of the liver.

John Bryce McMurrich, Ste. Anne de Bellevue, Que., Canada; Trinity Medical College, Toronto, Ont., 1896; aged 53; died, Dec. 28, 1925.

Archibald Blyth Stewart, Rosthern, Sask., Canada; University of Manitoba Faculty of Medicine, Winnipeg, Man., 1889; aged 59; died recently.

Andrew Ten Brook, Bloomington, Ill.; Jefferson Medical College of Philadelphia, 1876; aged 72; died, March 30, of cerebral hemorrhage.

Staley N. Chapin, Chicago; Rush Medical College, Chicago, 1885; aged 77; died, March 28, of carcinoma of the tonsil and parotid gland.

Milton P. Tolliver, Elnora, Ind. (licensed, Indiana, 1897); formerly county coroner; aged 77; died, March 23, of cerebral hemorrhage.

Richard Holden Love, Saskatoon, Sask., Canada; McGill University Faculty of Medicine, Montreal, Que., 1899; aged 49; died recently.

John W. Miller, Wayne City, Ill. (licensed, Illinois, 1888); aged 78; died, March 11, at the Deaconess Hospital, St. Louis, of pneumonia.

Allen C. Gregg, Denver; University Medical College of Kansas City, Mo., 1896; aged 52; died, March 10, of pneumonia.

William F. Taylor, Fort Worth, Texas; Missouri Medical College, St. Louis, 1877; aged 77; died in March, of heart disease.

William Grant Bixler, Panama, Neb.; Lincoln Medical College, 1903; aged 61; died, February 14, following a long illness.

Elton Arthur Chloupek, Oak Park, Ill.; College of Physicians and Surgeons, Chicago, 1899; aged 51; died, April 3.

Silas W. Patton, Catlettsburg, Ky. (licensed, Kentucky, 1894); aged 79; died, February 28, of senility.

Ferdinand Fischer, Carlyle, Ill.; Eclectic Medical Institute, Cincinnati, 1879; aged 76; died, March 28.

Correspondence

GLUCOSE AS A FOOD

To the Editor:—I read with much interest the editorial on "Glucose as a Food" (THE JOURNAL, Feb. 27, 1926). I was greatly surprised to find that this editorial was cited as one of the reasons before the Interstate and Foreign Commerce Committee of the House of Representatives favoring the approval of the bill already passed by the Senate, permitting the use of glucose as a component of sugar under the general title of sugar, and without notice to the consumer. I notice that your approval of this measure is not because of its repealing some of the most important provisions of the food law, and the legalization of adulteration and misbranding, as it is because of the value of glucose, which you describe as *par excellence* the physiologic sugar.

It is true that the only sugar found in the blood and tissues is glucose. You may be surprised, however, to find that this pending legislation is urged because it is hoped to supply two billion pounds of this sugar to the American consumer by reason of the permission to adulterate ordinary sugar without notice to the consumer. In order to make this amount of sugar, in round numbers, two billion pounds of starch must be extracted from its natural surroundings, converted into glucose *vi et armis,* and given in this form to the American consumer. Starch never exists free in nature. All the starches are parts of food products containing practically all the essential elements of nutrition. Starch by itself builds practically only one tissue; namely, fat. It is entirely deficient in vitamins and minerals, and as a food product, fed in any considerable quantity, would tend to develop diabetes, beriberi, xerophthalmia, scurvy, and many other diet deficiency maladies. It would present to the human stomach two billion additional pounds of prechewed and predigested starch, thus taking away from the natural digestive processes a large part of their functions, and in accordance with the well known principles of physiology, injuring to this extent the ability to digest starches and thus threaten the health and welfare of the whole body of American consumers.

When starch is converted into glucose by the natural processes of digestion, which at the same time are exerted on other necessary food products containing both vitamins and minerals, we have a natural production of glucose in which all the functions of mastication and digestion have received their full exercise.

By the pending measure all of these natural functions are obliterated, with the dangers to health and vitality already enumerated. It is extremely painful to see so excellent and scientific a journal as that of the American Medical Association quoted in support of such an unethical pending legislation.

HARVEY W. WILEY, M.D., Washington, D. C.

[COMMENT.—The point of view of the foremost champion of the "pure food laws" in this country has been presented in full, so that his contentions may be available in his own words to our readers. It might be well also to reread carefully the editorial in question (THE JOURNAL, February 27, p. 628). Dr. Wiley does not take exception to the well established chemical and physiologic facts there reviewed. He argues that glucose (corn sugar) is prepared from isolated starch, a product that "never exists free in nature"; so that the resulting artificially produced sugar will be devoid of the vitamins and the minerals that the naturally occurring starch-bearing foods carry along with the carbohydrate. Consequently, one readily infers, the liberal use of pure glucose might lead to an undesirable deprivation of certain food accessories essential to our nutritive well being.

The same argument may be applied, however, with equal cogency against the widespread use of the common table

sugar, sucrose—a product supplied everywhere in almost chemically pure form rather than as it occurs in nature. The sugar consumption of the United States now exceeds 100 pounds per capita per annum. Why the use of pure glucose should be singled out as more harmful, from the particular standpoint taken, than is the liberal consumption of the equally pure and isolated sucrose, is not made clear. Dr. Wiley avers that starch is a fat-former; but so are all the common sugars of commerce, to which no specific objection is made on that score. Furthermore, if our correspondent's contentions were carried to their logical conclusion, all purified foodstuffs would come under the same ban, whether they are corn starch, sugars, gelatin, or refined fats such as now enter widely into the American dietary.

Whether the replacement of starchy foods, slower of digestion, by sugars and the consequent "sparing" of the digestive organs with a simultaneous "flooding" of the alimentary tract with predigested foodstuffs is a physiologic detriment may well be argued as our correspondent has ventured. Whether the current use of overrefined and overmilled foods tends to bring about dietary deficiencies which the corresponding consumption of "natural" foods would be less likely to entail is likewise a problem of paramount importance. These questions should, we believe, be argued on their inherent merits and not be confused with the less tenable thesis that, in contrast with the consumption of pure sucrose from sugar cane or sugar beets, the dietary use of glucose is unwarranted. More than this our editorial has not discussed; nor should THE JOURNAL be expected to accept responsibility for any unwarranted deductions that may have been made from it.—ED.]

MASS CANCER INCIDENCE NEAR BAKERIES AND IN OTHER PLACES WHERE RATS ABOUND

To the Editor:—In the Paris letter (THE JOURNAL, Sept. 12, 1925, p. 838) there was a report of investigations by Negre in the French Tarn district on mass cancer incidence near bakeries and other places where rats abound. The matter constitutes apparently further corroborative evidence for parallel observations found in the literature. It seems that various worms can be among the cancer-inciting factors, and that rats can be the carriers of these worms and their larvae and the disseminators of their ova. As others may also be interested in the matter, I cite some references: In "Some Notes on Cancer" (*J. Cancer Research* **8**:45 [April] 1924) I mentioned certain cancer districts. L. W. Sambon (The Elucidation of Cancer, *J. Cancer* **2**:37 [Jan.] 1925) showed the coincidence of a high cancer rate, old bakeries, cockroaches and rats. In a second article entitled "Some Notes on Cancer" (*Am. J. M. Sc.* **170**:481 [Oct.] 1925) I described worms, their ova and larvae as cancer-inciting factors.

WILLY MEYER, M.D., New York.

HEMORRHAGIC NEPHRITIS

To the Editor:—In THE JOURNAL, April 3, in an article by George Baehr entitled "A Benign and Curable Form of Hemorrhagic Nephritis," the author says: "In the English and American literature nothing more than extremely casual references have come to my notice."

Dr. Baehr appears to have missed seeing a paper by Drs. J. P. O'Hare and W. G. Walker in the *Atlantic Medical Journal* (**27**:280 [Feb.] 1924) under the title, "Hemorrhagic Nephritis," in which attention is called to this form of renal lesion. Also in the Oxford Medicine, Chapter XI, by myself and Dr. O'Hare this is discussed on pages 721 to 739. Here attention is called to the frequency of the hemorrhagic type of nephritis, forty-seven cases having been seen by us at the Peter Bent Brigham Hospital in ten years, and it having constituted 25 per cent of the nephritic cases observed among children by L. W. Hill (THE JOURNAL, Dec. 6, 1919, p. 1747; *Am. J. Dis. Child.* **17**:270 [April] 1919).

In Oxford Medicine there is not a subgrouping of these cases into benign and progressive forms, though the recoverability is indicated under "Prognosis," where appears the statement, "Numerous cases get well though the progress to recovery may be slow. Most are long drawn out and many gradually progress downward as a chronic nephritis without edema."

I agree with all of Dr. Baehr's statements and feel that the hemorrhagic group is a very important type of nephritis. My own experience, however, has not yielded the striking improvement following tonsillectomy. Following tonsillectomy usually I have observed a prolonged continuation of the hematuria, sometimes with eventual disappearance, at other times with progression into a chronic form of nephritis eventually fatal.

HENRY A. CHRISTIAN, M.D., Boston.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF ECZEMA

To the Editor:—I would be pleased to know something of the latest advances made in the treatment of eczema. Is there any known treatment that is really worth while, or that shows results—any kind of treatment, medication, light therapy, serum treatment, or any other kind in your knowledge? Can you suggest anything or refer me to any articles of promise?

VERNER I. BAUGH, M.D., Girard, Texas.

ANSWER.—The greatest recent advance in the solution of the eczema problem has been the recognition and separation from eczema of eczematoid ringworm. Many cases formerly classed as eczema are now recognized and treated successfully as ringworm (White, C. J., and Greenwood, A. M.: Epidermophytosis, *Wisconsin M. J.* **24**:1 [June] 1925; *Illinois M. J.* **48**:269 [Oct.] 1925).

A second, constantly increasing group separated from eczema, though very closely related to it, is that of dermatitis from external irritants. Careful detective work will sometimes discover the cause of a dermatitis in some substance with which the patient comes into frequent contact. Hair dyes, dyed furs, house plants, lacquered wooden articles, and colored newspaper supplements are a few of these. Sensitization to external and internal irritants must be considered in these cases. Skin tests with proteins give help in some cases, though often disappointing and sometimes actually misleading (O'Keefe, E. S.: Protein Sensitivity in Children with Negative Cutaneous Reactions).

Focal infection must be considered as a possible cause (Vischer, J. W.: The Rôle of Focal Infection in the Etiology of Eczema, *Am. J. M. Sc.* **170**:723 [Nov.] 1925).

Faulty metabolism and inefficient excretion may be to blame (Schamberg, J. F., and Brown, H.: Relationship of Excess of Uric Acid in the Blood to Eczema and Allied Dermatoses, *Arch. Int. Med.* **32**:203 [Aug.] 1923; Study of Blood Uric Acid in Diseases of Skin, *Arch. Dermat. & Syph.* **8**:801 [Dec.] 1923. McGlasson, I. L.: Hyperglycemia as an Etiologic Factor in Certain Dermatoses, *ibid.* **8**:665 [Nov.] 1923. Ayres, Samuel, Jr.: Glucose Tolerance Reactions in Eczema, *ibid.* **11**:623 [May] 1925).

Endocrine disturbances must always be considered. The roentgen ray, usually in a dosage of one-fourth skin unit once a week, gives at least temporary relief in most cases. Ultraviolet rays give relief in some cases, though they must be used with caution in acute exacerbations and in hyperglycemia.

Mild foreign protein injections may be helpful, acting possibly by desensitizing the patient. Autoserum injections, either intramuscular or intravenous, are probably of this nature. Milk injections intramuscularly, or bacterial vaccines used in the same way, may help. Severe reactions should be avoided.

The use of crude coal tar ointment has been of great value in the treatment of adult as well as infantile eczema (White,

C. J.: Infantile Eczema and Examination of the Stools, *Arch. Dermat. & Syph.* **7**:50 [Jan.] 1923).

The nervous system assumes an important rôle in the causation of many cases. Sedatives, usually bromides, are often valuable.

IMMUNIZING AGAINST EGG

To the Editor:—I will appreciate any advice you can give me concerning the method and technic of immunizing a patient against egg. My patient is so hypersensitive to both egg white and yolk that a minute quantity, and often just the odor of cooking eggs, will give her asthma.

Last April I procured a freshly prepared quantity of whole egg antigen in solutions of from 1: 500 to 1: 10,000. I first tested her out for beginning dosage, getting a reaction (local) to everything above 1: 120,000, and began with 0.15 cc. of that dilution. Injections were given twice a week, increasing from 0.15 to 0.20 cc. each injection with no general reaction and only slight local reaction, until 0.60 cc. of a 1: 80,000 dilution was reached, when the arm showed a marked local reaction, being swollen and red. However, by repeating this dose twice I was able to get past it and continued to progress without difficulty until almost through the 1: 5,000 dilution, when the local reactions became severe. In spite of some local reaction with each injection, I worked up to the 1: 1,000 strength, when the patient had a sharp attack of asthma requiring epinephrine. I then reduced the dose but kept the same dilution, each time, however, getting a varying amount of local and general reaction. After this I suspended treatment two weeks, resuming with 1: 10,000 dilution, but with each injection there was a marked local reaction. Concluding now that I was getting nowhere, I gave up the attempt.

My experience suggested to me that I was raising the immunity for a time and then she lost it and became as sensitive as ever. Wherein was the technic at fault?

WILBUR T. LITTLE, M.D., Canon City, Colo.

ANSWER.—If it is feasible, eggs should be excluded completely from the patient's diet. If this is too great a hardship in the management of the household, the following mode of desensitization might be tried, but during the period of desensitization no eggs whatever should be eaten, not even food that contains even a trace of egg white or egg yolk:

One drop of egg white, taken with a medicine dropper, is mixed with 1 quart of water and well shaken. Of this first dilution, 20 drops is shaken well with another quart of water.

Of this second dilution, one teaspoonful is taken daily by mouth for one week. In the second week the dose should be increased every day one teaspoonful, so that the patient takes on the eighth day two teaspoonfuls, on the ninth three, on the tenth, four, and so on. In the third week half a tumbler of the second dilution should be taken daily by mouth; in the fourth, a whole tumbler daily.

In the fifth week, 20 drops of the first dilution (1 drop of egg white and 1 quart of water) should be placed in a glass of water and taken daily by mouth, and this increased by 20 drops every week and taken daily until the patient reaches one teaspoonful or 1 fluidrachm; after that she should continue to increase every week 1 fluidrachm, taking a dose daily, to 2, 3, 4, 5, 6, 7 fluidrachm, etc. In the twelfth week, 3 ounces; in the fourteenth, 6 ounces.

If the patient is so sensitive that she cannot tolerate even the dilutions suggested, the same dilutions should be made and the desensitization attempted with them by the rectal route.

GRAM STAIN

To the Editor:—Is there some method for gram staining in which a stable stock solution of gentian violet may be used?

M. B. ROSENBLÜTH, M.D., New York.

ANSWER.—The usual methods of preparing the aniline-gentian violet stain for use in the Gram method of staining bacteria require freshly prepared mixtures, owing to the instability of the stain so made. Sterling has introduced, however, a formula for such a stain that has proved very reliable and satisfactory and has the advantage that it will remain permanent for three or four months. The formula is: gentian violet, 5 Gm.; alcohol, 95 per cent, 10 cc.; aniline, 2 cc.; distilled water, 88 cc. The aniline and the alcohol are thoroughly mixed by shaking, and the water is added. Now the gentian violet is ground in a mortar, and the aniline solution added slowly until the stain is practically dissolved. The solution is filtered into a staining bottle.

Instead of using this stain, one may substitute with satisfactory results a 0.5 per cent aqueous solution of methyl violet 6 B, which is very permanent and has been advocated by many workers for use in the Gram method of staining. When the latter solution is used, it is advisable to use a somewhat stronger iodine solution in the second step of the staining process than is used with the gentian violet solution. The formula for this iodine solution is: iodine, 1 Gm.; potassium iodide, 2 Gm.; distilled water, 100 cc.

SENSITIZED BACTERIAL VACCINES

To the Editor:—May I ask your opinion regarding the relative value of "sensitized bacterial vaccines" as compared with the ordinary type? I am especially interested in the so-called triple vaccine against typhoid infections. In a series of three vaccinations with these bacterins reaching back through the last ten years, I have experienced an increasingly severe reaction from vaccine. On the last occasion, I was almost disabled for more than three weeks, and I have seen somewhat similar reactions in some of my patients. It has been suggested to me that the "Serobacterins" made by a well known house would markedly diminish the disturbing reaction. I have usually employed United States government vaccine in work with members of the R. O. T. C. and on my own person, and otherwise, more commonly Parke, Davis & Company's. A bacteriologic friend of mine has suggested that the difficulty might be lessened by the elimination of the paratyphoid vaccine, but one does not like to forego the protection against this infection. I should be very grateful for your opinion on this matter and for reference to any literature which you might suggest.

ARTHUR V. STOUGHTON, M.D., Claremont, Calif.

ANSWER.—There is no evidence that "sensitized bacterial vaccines" have greater protective power than simple vaccines. Sensitized vaccines, though claimed to have certain advantages (New and Nonofficial Remedies, 1925, p. 367), are objectionable because they may sensitize the injected person to the proteins in the animal serum with which the bacteria of the vaccine have been treated. With the sensitized vaccine there is injected into the body additional and undesirable foreign protein. Three series of vaccinations with triple typhoid vaccine in ten years is going further than seems to be necessary. Obviously, the recipient is in an allergic or sensitive state and further injections of any kind of typhoid vaccine are not at all indicated. Well vaccinated persons appear to be protected for an indefinite time; in the U. S. Army, two courses of injections are given at an interval of three years. This at present may be regarded as our best standard. Unfortunately, there is not available a simple test, like the Schick test in the case of diphtheria or the Dick test for scarlet fever, that will tell whether a person is susceptible or not to typhoid infection. The problems of antityphoid vaccination have been discussed recently in an able and rational manner by H. J. Nichols and Parker Hitchens (The Reactions of Typhoid Vaccination, *J. Lab. & Clin. Med.* **11**:517, 1926).

PREVENTION OF RENAL CALCULUS

To the Editor:—I would appreciate it greatly if you will outline for me the proper diet and other preventive measures to be taken in order to avoid the recurrence of renal calculus (calcium oxalate). Recently a calcium oxalate stone was removed from my ureter. Please do not publish my name.

M.D., New York.

ANSWER.—One of the most important things in the prevention of recurrence of stone is dilution. The patient should be instructed to drink a large amount of water so as to keep the specific gravity of the urine below 1.005. Two factors that are supposed to play an important part in the recurrence of oxalate stone are an excessive nitrogenous intake coupled with an excretory sluggishness.

It would be advisable to carry on with a low nitrogenous diet. Alcohol, tea, coffee and tobacco should be used sparingly and the bowels kept open. The patient should of course take a certain amount of exercise—outdoors, preferably—that will make him perspire. Repeated roentgen-ray examination should be made from time to time so that if stone does recur it will be recognized early, at which time it can be treated by dilating the ureter with bougies and injecting oil to aid the stone in its passage down the ureter.

Should there be stasis in the upper urinary tract, such as hydro-ureter or hydronephrosis due to stricture of the ureter, this should be treated with dilation.

PREGNANCY FOLLOWING THYROIDECTOMY

To the Editor:—1. What effect will pregnancy have on a patient who has suffered from a toxic goiter, which was operated on about four years ago and the patient having been in fair health since? With the first pregnancy there was some disturbance with the thyroid, and a severe toxic thyroid developed following the second pregnancy, with exophthalmos, fast pulse, enlarged gland, and frequent bowel movements. 2. Is it generally taught that primiparas usually go into labor two or three weeks before the calculated time? Kindly omit my name.

M.D., South Dakota.

ANSWER.—1. If the patient's heart has been affected, she should be treated like other women who have heart trouble. If the heart is in good condition, pregnancy will most likely have no ill effects on the patient, though the baby may be influenced unfavorably. When a pregnant woman has a diminished output of thyroid secretion because of congenital deficiency, operation or other cause, the baby frequently is

born with an enlarged thyroid. This is most likely a compensatory hypertrophy to make up for the maternal deficiency. In some instances the thyroid enlargement in the new-born persists for a long time and is troublesome. To avoid this condition in the new-born, the mother during pregnancy should receive compound solution of iodine, 5 drops, twice a day for one week. After an interval of a few weeks, the solution should again be taken for one week.

2. While primiparas often go into labor a few weeks before term, it is not the rule for this to occur. Old primiparas have a tendency to go beyond term.

TREATMENT OF PINWORMS

To the Editor:—Please advise if there is any effective way of ridding a child or an adult of pinworms. The following has already been used and found inadequate: santonin and calomel, one-half grain of each daily for four days; twenty-four hours' fast; administration of oil of chenopodium, 8 drops, with 1 ounce of castor oil together; nightly enemas of infusion of quassia, and anointing of anus with ointment of ammoniated mercury. The cooperation of the patient has been excellent, but the worms are still present.

M. W. HOLLINGSWORTH, M.D., Santa Ana, Calif.

ANSWER.—In obstinate cases, the attack should be carried on simultaneously from above and below. One santonin tablet (0.03 Gm.) three times daily for three days should be combined with daily rectal irrigations of vermicidal solutions. It is stated that 1 per cent soap solution kills the pregnant females. Vinegar (from 30 to 100 per thousand) is also recommended. After two weeks the process is repeated. During this entire time most painstaking prophylaxis must be kept up, especially scrupulous cleanliness of the anal region and the wearing of closed drawers day and night. Over night the following ointment may with advantage be applied to the anus:

		Gm.
℞	Ethyl aminobenzoate (benzocaine)	2
	Salicylic acid	0.5
	Hydrous wool fat	20

The hands must be kept carefully clean, being washed thoroughly and long with soap and water after dressing and after each bowel treatment. It must be admitted that, in spite of most careful treatment, complete eradication is at times impossible; but the infestation may be kept sufficiently low to maintain the patient symptom-free.

TOXIN-ANTITOXIN AND ASTHMA

To the Editor:—Please advise me as to the risk, if any, in giving toxin-antitoxin to a child who has known asthmatic attacks.

J. G. LOGUE, M.D., Williamsport, Pa.

ANSWER.—If the asthmatic attacks are precipitated by coming in contact with horses or emanations from horses, it would seem possible that alarming symptoms might develop after toxin-antitoxin injection because of the presence of horse proteins in the antitoxic serum used in making the toxin-antitoxin mixture. Recently Bauer and Wilmer (Toxin-Antitoxin, Hypersensitivity to Its Protein Content, THE JOURNAL, March 27, p. 942) report, however, that in their experience, which seems to be large, children sensitive to horse protein did not react to the toxin-antitoxin mixture. But in any case, injection of foreign protein in asthmatic persons ought to be done with especial care and only when indicated clearly.

DETERMINATION OF MENTAL DEVELOPMENT

To the Editor:—I have a backward baby under treatment who is showing a tendency toward mongolism, and whose parents wish to check up his mental development at intervals. Do you know of any set of test questions that would be of service under the circumstances, and, if so, where I could procure copies?

ERLE DRAPER, M.D., Bedford, Quebec.

ANSWER.—The tests in most common use are those of the Stanford revision of the Binet scale. The materials for these tests can be obtained from the Houghton, Mifflin Company, which has offices in Boston, New York and Chicago.

DECREASING APPETITE

To the Editor:—Is there any drug, or combination of drugs, which taken by mouth will decrease the appetite without deleterious effect on the health? Please omit my name.

M.D., Ohio.

ANSWER.—Probably not.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

AMERICAN BOARD OF OTOLARYNGOLOGY.

CALIFORNIA: San Francisco, April 27. CANADA: Montreal, June 1. Sec., Dr. H. W. Loeb, 1402 South Grand Boulevard, St. Louis, Mo.

ARKANSAS: Little Rock, May 11-12. Sec., Dr. J. W. Walker, Fayetteville. Homeo. Board, Little Rock, May 11. Sec., Dr. A. A. Pringle, Eureka Springs. Eclectic Board, Little Rock, May 11. Sec., Dr. Claude E. Laws, Fort Smith.

DELAWARE: Wilmington, Regular Board and Homeo. Board, June 15-17. Pres., Dr. H. W. Briggs, Wilmington.

FLORIDA: St. Petersburg, June 14-15. Sec., Dr. H. M. Rowlett, Box 603, Tampa.

GEORGIA: Atlanta, June 9-11; Augusta, June 1-3. Sec., Dr. C. T. Nolan, Marietta, Ga.

KANSAS: Kansas City, June 15. Sec., Dr. Albert S. Ross, Sabetha.

MARYLAND: Baltimore, Reg. Bd., June 15-18. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral St., Baltimore. Homeo. Bd., June 15-16. Sec., Dr. Joseph S. Garrison, Old Orchard Rd., Ten Hills, Baltimore.

MICHIGAN: Ann Arbor, June 8-10. Detroit, June 14-16. Sec., Dr. Guy L. Connor, 707 Stroh Bldg., Detroit.

NATIONAL BOARD OF MEDICAL EXAMINERS: Part I, June 21-23; Part II, June 22-23. All applications should be made on or before May 15. Sec., Dr. J. S. Rodman, 1600 Walnut Street, Philadelphia.

NEBRASKA: Omaha, June 8-10. Director, Bur. of Exam. Bds., Mrs. Clark Perkins, Lincoln.

NEVADA: Carson City, May 3. Sec., Dr. Simon L. Lee, Carson City.

NEW JERSEY: Trenton, June 15-16. Sec., Dr. Alexander MacAlister, Room 1101, Trenton Trust Bldg., Trenton.

OHIO: Columbus, June 8-11. Sec., Dr. H. M. Platter, Columbus.

OKLAHOMA: Oklahoma City, June 15-16. Sec., Dr. J. M. Byrum, Shawnee.

TEXAS: Austin, June 15-17. Sec., Dr. T. J. Crowe, 918 Mercantile Bank Bldg., Dallas.

VIRGINIA: Richmond, June 16-19. Sec., Dr. J. M. Preston, 720 Shenandoah Life Bldg., Roanoke.

Utah February Reciprocity Report

Mr. J. T. Hammond, director of the Department of Registration of Utah, reports that 8 candidates were licensed by reciprocity at a meeting held Feb. 5, 1926. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Drake University College of Medicine		(1910)	Iowa
University of Maryland School of Medicine		(1924)	Penna.
University of Nebraska College of Medicine		(1925, 3)	Nebraska
Ohio State University College of Homeo. Medicine		(1921)	Ohio
Jefferson Medical College of Philadelphia		(1908)	Penna.
Wisconsin College of Physicians and Surgeons		(1905)	Wisconsin

Washington January Examination

Mr. William Melville, director of the Department of Licenses of Washington, reports the oral and written examination held at Olympia, Jan. 11-13, 1926. The examination covered 13 subjects and included 130 questions. An average of 75 per cent was required to pass. Of the 6 candidates examined, 5 passed and 1 failed. Thirty-two candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent
University of Virginia Department of Medicine		(1924)	80
University of Alberta Faculty of Medicine		(1925)	83.5
University of Manitoba Faculty of Medicine		(1914)	77
McGill University Faculty of Medicine		(1913)	76
University of Kief, Russia		(1893)*	75

College	FAILED	Year Grad.	Per Cent
Washington University School of Medicine		(1908)	†

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Harvey Medical College, Chicago		(1903)	Illinois
Northwestern University Medical School		(1906) (1912) Utah, (1925) Illinois	Montana
Rush Medical College		(1916) Illinois, (1925) Illinois,	Minnesota
State University of Iowa College of Medicine		(1904)	Iowa
Louisville Medical College		(1898)	Illinois
University of Louisville School of Medicine		(1911) (1914) Kentucky	Texas
Harvard University		(1894) Illinois, (1919)	Minnesota
University of Michigan Med. School		(1905) Indiana, (1917)	New York
University of Minnesota Medical School		(1916), (1917), (1921), (1925),‡	Minnesota
St. Louis University School of Medicine		(1920)	Iowa
Washington University School of Medicine		(1923)	California
John A. Creighton Medical College		(1913)	Nebraska
Medical College of Ohio		(1897)	Montana
Omaha Medical College		(1896)	Montana

Cornell University Medical College	(1921)	New York
University of Cincinnati College of Medicine	(1924)	Ohio
University of Oregon Medical School	(1919)	Oregon
Jefferson Med. Coll. of Philadelphia	(1917) Oregon, (1923)	Idaho
Meharry Medical College	(1923)	Tennessee
McGill University Faculty of Medicine	(1904)	N. Dakota

* Verification of graduation in process.

† No grade given.

‡ This candidate has completed his medical course and will receive his M.D. degree on completion of a year's internship in a hospital.

Book Notices

LIFE AND EVOLUTION. An Introduction to General Biology. By S. J. Holmes, Ph.D., Professor of Zoology in the University of California. Cloth. Price, $3.50. Pp. 449, with 227 illustrations. New York: Harcourt, Brace & Co., 1926.

The principal title of this new book by a prolific writer is considerably less indicative of its contents than is the subtitle. If one bought the book with the idea of getting a new statement about the much debated theory of evolution one would be disappointed, for only the last third of the book deals with evolution, and the treatment is unusually orthodox. The main part of the book is devoted to an exposition of the principles of biology, mainly those usually brought out in textbooks of general zoology. Dr. Holmes has followed traditional lines so far as content is concerned, but has ventured to modify the manner of presentation in some respects. In order to make the book more readable for the casual reader, he has discarded most of the tried and proved pedagogic devices employed by textbook writers. Thus, the chapters read straight ahead without topical subtitles or paragraph heads. The use of differentiated type for emphasis or to aid in making clear the organization is also dispensed with. What the book gains for the general reader, if anything is really gained, is lost for the student. The book differs little in content from standard textbooks on general zoology. To be sure, there is a chapter of sixteen pages on the green plant, but the rest of the treatment is strongly zoological. It will therefore hardly satisfy those instructors who prefer a course about equally divided between botany and zoology. The literary style is facile and interesting enough to make it good reading for one who is intent on getting an orthodox statement about the prevalent ideas and facts of modern biology.

MICROBE HUNTERS. By Paul de Kruif. Cloth. Price, $3.50. Pp. 363, with illustrations. New York: Harcourt, Brace & Co., 1926.

It is a fascinating story: the discovery of microbes, how they grow, what diseases they cause in man and animals, and finally the means of protecting mankind against them. De Kruif has told, in highly dramatic form, the lives of the principal characters in the story, from Leeuwenhoek, who first saw microbes through the lenses of his own making, to Paul Ehrlich, discoverer of the "magic bullet" which could destroy the spirochete of syphilis. The curiosity that drove these men to endless searching for the causes of disease in spite of all discouragement, their adventures, failures and successes, are all vividly portrayed. In many places the tale of their adventures reads like a romance. Indeed, few romances can offer more exciting material than the search of Bruce for the cause of trypanosomiasis and the final tracking down of the tsetse fly, or Walter Reed's discovery of the transmission of yellow fever by mosquitoes. The discoverers, as they appear in these pages, are far from the perfect and rather priggish members of the human race that they are sometimes represented to be. De Kruif writes as though he knew each one intimately, were in his confidence, and had special insight into his actions. The variety of character is most interesting. Pasteur's truly brilliant inspirations, "shooting out like a display of village fireworks going off bewilderingly by accident," sometimes indeed overshooting the mark and given to the world prematurely, stand in sharp contrast to Koch's colder and more precise methods. Then we are told of Metchnikoff's extraordinary career, his sudden jumps to unheard-of conclusions, his alternating attempts to commit suicide and to find the means of prolonging life indefinitely. The jealousies and disputes that arose among them, their undignified wranglings, as when the French surgeon Guérin rose from his seat and "aimed a wallop" at Pasteur, show them to have suffered from the common defects of ordinary mankind. Pasteur and Koch, in their excessive patriotism, denounced each other's discoveries, and later Ross and Grassi engaged in a violent quarrel over the priority in discovering the mosquito that transmits malaria. Unfortunately, doubtless in the effort to present the material in a vivid and dramatic manner, the style has taken on an exaggerated quality which is annoying. "Devilish," "infernal" and "hellish" are the adjectives frequently used, and one gets the impression that most of the hunters were insane, or at least half mad at some time in their careers. We hear of Walter Reed that "never was there a good man who thought of more hellish and dastardly tests." The slangy expressions also seem out of place, such as a demonstration by Koch that was a "knockout" before various "bigwigs," and, concerning some work of Roux, "scientific searchers . . . have held their noses at such an experiment." These give the book somewhat the quality of the best seller in fiction. However, the material throughout is extremely interesting, and will prove so to scientists and to others alike. The lives of the discoverers are an inspiration to other workers, and it is pleasant to find them so very human, and "yet not untouched with a halo of divine romance."

LEHRBUCH DER LOKALANÄSTHESIE DES OHRES UND DER OBEREN LUFT- UND SPEISEWEGE. Von Dr. Caesar Hirsch, Chefarzt der Abteilung für Hals-, Nasen und Ohrenkranke des Marienhospitals in Stuttgart. Mit einem Vorwort von Professor Dr. O. Voss, Direktor der Universitäts-ohrenklinik in Frankfurt a. M. Paper. Pp. 293, with 104 illustrations. Stuttgart: Ferdinand Enke, 1925.

Beginning with a discussion along general lines on the subject of pain, local anesthesia, and the description of various drugs used in producing the anesthesia, the author takes up the various methods and the production of local anesthesia. He at first describes the so-called superficial anesthesia by means of local application to the skin or mucous membrane. Then the matter of the use of anesthesia by injection is described, together with the instruments. The second section of the book refers to operations on the scalp, ear, face and nose, and describes them in detail. This is followed by a chapter concerning operations on the mouth, pharynx and neck. This work details precisely the methods of producing local anesthesia in the parts under discussion, and there are excellent illustrations. A bibliography is appended to this readable and instructive work.

A TEXTBOOK OF PATHOLOGY, GENERAL AND SPECIAL. For the Use of Students and Practitioners. By J. Martin Beattie, M.A., M.D., L.R.C.P., Professor of Bacteriology, University of Liverpool, and W. E. Carnegie Dickson, M.D., B.Sc., F.R.C.P., Pathologist to the West End Hospital for Nervous Diseases, London. Third edition. Cloth. Price, $11. Pp. 1103, with 516 illustrations. St. Louis: C. V. Mosby Company, 1925.

Originally, the two parts of this work, "General Pathology" and "Special Pathology," were published as separate volumes. The present edition may be procured in two volumes, as before, or combined in one. The authors state in the preface that the second edition was long overdue, largely because of their participation in the World War; and that in this edition minor alterations and additions have been made to bring the material up to date. The two volumes of the first edition were separately reviewed in THE JOURNAL in 1909 and 1910. At that time, the review of the section on general pathology was not entirely favorable. The criticism was made that some important subjects were omitted altogether and that other subjects were treated in so brief a manner as not to satisfy an ardent student. The review of the section on special pathology was distinctly unfavorable, and on the same grounds. Apparently the reviewers, entirely within their rights, kept the previous editions, as they are not at hand for comparison. In the present edition, some of the omissions specifically mentioned in the previous reviews are supplied; not all of them. The authors seem to have had very clearly in mind the sort of work they intended originally to produce and have persisted in their original intention. Certain subjects for which the student would have small use are treated superficially. Foundational processes, such as inflammation and repair, are treated at length. In the fifteen years since

the first edition was published, medical education, at least in America, has changed greatly. The present-day American student, struggling to keep his poise in the welter of our curriculums, will find in this Edinburgh book a coherent presentation of the second most difficult subject with which he has to make acquaintance. He can link up this material with the clinical medicine and surgery of his succeeding years in school and in practice. The authors apparently have decided that controversial and discursive material can wait until the student has the background to assimilate it. Admirable illustrations throughout the text help to establish such a background.

ABHANDLUNGEN AUS DER NEUROLOGIE, PSYCHIATRIE, PSYCHOLOGIE UND IHREN GRENZGEBIETEN. Herausgegeben von K. Bonhoeffer. Heft 34. Der heutige Stand der Behandlung der progressiven Paralyse. Von Dr. Ladislaus Benedek, o. ö. Universitätsprofessor, Vorstand der neurologischen und psychiatrischen Klinik der Stefan Tisza-Universität in Debreczen (Ungarn). Paper. Price, 15 marks. Pp. 219, with 25 illustrations. Berlin: S. Karger, 1926.

The author first gives as background a general discussion of the clinical and histologic evidences for the possible curability of general paralysis. He takes up the Staussler Jakob theory that general paralysis histologically is usually a general nonspecific reaction to the spirochete or its toxic products, but that in certain cases evidences of a specific and beneficial tissue reaction in the form of miliary gummas are present. The author fails to consider Spielmeyer's probably correct interpretation of the supposed gummas as local accentuations of the general inflammatory process. The etiology is considered from all aspects. There is a short discussion of the relation of the spirochetes to the brain changes. All the existent theories as to the pathogenesis of general paralysis are given. Sixty-three full case reports show the effects of the immune serum treatment, which is the use of the serum of horses immunized over a period of two months with extracts of paretic brains. Only 9.5 per cent of patients thus treated showed improvement. The treatment by fever production through injection of tuberculin, vaccines, nucleic acid and milk is discussed, but favorable results are not reported. The malaria treatment is taken up at length and the detailed technic given. The author's series of cases showed improvement in 35 per cent, which is slightly better than that reported from other clinics. Arsenical therapy, including the Swift-Ellis and the Gennerich method, are described. Tryparsamide is omitted probably because it is not obtainable in Hungary.

THE PATHOLOGY OF TUMOURS. By E. H. Kettle, M.D., B.S., Professor of Pathology and Bacteriology, Welsh National School of Medicine, Cardiff. Second edition. Cloth. Price, $5. Pp. 285, with 159 illustrations. New York: Paul B. Hoeber, Inc., 1925.

Amplified portions dealing with etiology, experimental research, carcinoma and endothelioma and thirty-three new illustrations are in this edition. The ending "ata" has been retained for names of tumors, notwithstanding the increasingly prevalent use of English plurals. In the plain, but adequate, illustrations, great care has been displayed. The "special pathology" or distribution of tumors in special regions, occupying the final fourth of the work is very abbreviated in spots, merely a list or syllabus of what may happen. The work has already met approval as a manual.

LEAD POISONING. By Joseph C. Aub, Lawrence T. Fairhall, A. S. Minot, and Paul Reznikoff. With a chapter on the prevalence of industrial lead poisoning in the United States by Alice Hamilton, from the Department of Physiology, Harvard School of Public Health, and the Medical Clinic, Massachusetts General Hospital. Cloth. Price, $4. Pp. 265, with illustrations. Baltimore: Williams & Wilkins Company, 1926.

This is the seventh of the "Medicine Monographs" published by this firm, and that it is written and published here is gratifying because it is the type of monograph we have been accustomed to finding in German or French. Except for its legal bearings, all phases of lead poisoning are thoroughly considered. A great deal that is new from work by the authors is included, and of such portions those dealing with the physical and physiologic chemistry of plumbism are preeminent. That only 500 of the 2,200 references in their files were used gives some index of the care employed and the scope of the work.

ABDOMINAL AND PELVIC SURGERY FOR PRACTITIONERS. By Rutherford Morison, Hon. M.A. and D.C.L., Hon. LL.D., M.B., Consulting Surgeon, Royal Victoria Infirmary and Dental Hospital, Newcastle-on-Tyne. Cloth. Price, $2.75. Pp. 212, with 9 illustrations. New York: Oxford University Press, 1925.

This is not intended as a complete treatise, but the clarity of thought and simplicity of style of the author make it profitable and enjoyable reading. Abdominal emergencies, subacute abdominal diseases and chronic abdominal and pelvic diseases are the subjects covered. The work ends with a brief chapter on postoperative complications and treatment. The bulk of material covered represents diagnosis; little attention is devoted to treatment except in the numerous case reports cited. The book is worthy of a place in the library of every practitioner.

HANDBUCH DER EXPERIMENTELLEN THERAPIE SERUM- UND CHEMOTHERAPIE. Ein Handbuch für die ärztliche Praxis und Klinik. Herausgegeben von A. Wolff-Eisner. Second edition. Paper. Price, 35 marks. Pp. 790, with 69 illustrations. Munich: J. F. Lehmanns, 1926.

So far as important recent American work is concerned, this book presents "Nichts neues." The scarlet fever work is not discussed at all. The book cannot be recommended as giving an adequate idea of the present state of knowledge in its field.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits.

DIE CHIRURGIE. Eine zusammenfassende Darstellung der allgemeinen und der speziellen Chirurgie. Herausgegeben von Prof. Dr. M. Kirschner, Direktor der chirurgischen Klinik der Universität Königsberg i Pr., und Prof. Dr. O. Nordmann, Dirigierender Arzt am Auguste-Viktoria-Krankenhaus, Berlin. Lieferung 7. Nahtchirurgie. Von Priv.-Doz. Dr. E. Gohrbandt. Die allgemeine Lehre von den eitrigen Infektionen (einschliesslich septische Allgemeininfektion). Von Priv.-Doz. Dr. A. Buzello. Die allgemeine Lehre von den spezifischen Infektionen. Von Prof. Dr. R. Eden und Priv.-Doz. Dr. P. Drevermann. Paper. Price, 17 marks. Pp. 936, with illustrations. Berlin: Urban & Schwarzenberg, 1926.

More parts of German system of surgery, dealing this time with surgery of specific infections.

DIE BIOLOGIE DER PERSON. Ein Handbuch der allgemeinen und speziellen Konstitutionslehre. Herausgegeben von Prof. Dr. Th. Brugsch und Prof. Dr. F. H. Lewy. Lieferung I. Einführung in die Konstitutionslehre, ihre Entwicklung zur Personallehre. Von Prof. Dr. Th. Burgsh. Das Problem der Individualität. Von Dr. E. Straus. Die rechnerische Auswertung statistischer Beobachtungsergebnisse (Einführung in die Kollektivmasslehre). Von Dr. H. Salinger. Bedeutung des Normbegriffes in der Personallehre. Von Prof. Dr. I. Kaup. Allgemeine Vererbungslehre. Von Prof. Dr. W. Johannsen. Paper. Price, 15 marks. Pp. 322, with 22 illustrations. Berlin: Urban & Schwarzenberg, 1926.

First part of new system of human biology.

DIE BLUTTRANSFUSION. Von Privatdozent Dr. B. Breitner, I. Assistent der I. chirurgischen Universitäts-Klinik in Wien. Paper. Price, 6.90 marks. Pp. 113, with 24 illustrations. Vienna: Julius Springer, 1926.

Monograph with bibliography. Literary study is incomplete, and conclusions are not in accord with best modern American practice.

PLEOMORPHISM IN BACTERIAL PROTOPLASM. A Study in Psittacosis. By Andrew Todd McClintock, M.D. Archives of the Andrew Todd McClintock Memorial Foundation for the study of diseases of the alimentary canal. Volume I. Cloth. Pp. 240, with illustrations. Privately printed. New York, 1925.

Posthumous manuscript of young investigator on timely topic of bacterial mutations.

ALLGEMEINE UND SPEZIELLE CHIRURGIE DES KOPFES EINSCHLIESSLICH OPERATIONSLEHRE UNTER BESONDERER Berücksichtigung des Gesichts, der Kiefer und der Mundöhle. Ein Lehrbuch. Von Eduard Borchers, Professor und Oberarzt der chirurgischen Universitätsklinik Tübingen. Paper. Price, 54 marks. Pp. 382, with 326 illustrations. Berlin: Julius Springer, 1926.

Beautifully printed text on special surgery of the head.

A FURTHER REPORT ON CANCER OF THE BREAST. With Special Reference to Its Associated Antecedent Conditions. By Janet E. Lane-Claypon, M.D., D.Sc. Reports on Public Health and Medical Subjects No. 32. Price, 3s. net. Pp. 189. London: His Majesty's Stationery Office, 1926.

Shows that cancer is more frequent in breasts of unmarried women and in those that have nursed insufficiently or too much; also that large majority are diagnosed too late for efficient surgery.

HANDBUCH DER GESAMTEN AUGENHEILKUNDE. Von Th. Axenfeld und A. Elschnig. Lieferung 488-490. I. Teil, I. Band, 2 Abt., Kapital III. Mikroskopische Anatomie der Regenbogenhaut. Von M. Wolfrum. Paper. Price, 16.50 marks. Pp. 218, with 57 illustrations. Berlin: Julius Springer, 1926.

New part on histology of the iris, from well established German system of ophthalmology.

CONTRIBUTION À L'ÉTUDE DES PARAPLÉGIES POTTIQUES. Essai sur l'évolution et le pronostic, basé sur 40 observations personnelles. Par Mme. le Dr. Sorrel-Dejerine. Préface du Dr. André-Thomas. Paper. Price, 40 francs. Pp. 401, with 98 illustrations. Paris: Masson & Cie, 1926.

Monographic consideration, surveying literature and discussing forty cases.

THÉRAPEUTIQUE CHIRURGICALE. Par P. Lecène, Professeur à la Faculté de médecine de Paris, et R. Leriche, Professeur à la Faculté de médecine de Strasbourg. Tome III. Abdomen et organes génito-urinaires. Par P. Lecène. Cloth. Price, 50 francs. Pp. 645. Paris: Masson & Cie, 1926.

French textbook of surgery, without a picture.

L'EXPLORATION FONCTIONNELLE DU FOIE ET L'INSUFFISANCE HÉPATIQUE. Par Drs. Noël Fiessinger et Henry Walter. Paper. Price, 30 francs. Pp. 387, with illustrations. Paris: Masson & Cie, 1925.

Unusually well presented French monograph on liver function tests.

RÖNTGENBEHANDLUNG INNERER KRANKHEITEN. Von Prof. Dr. W. Parrisius, Privatdozent an der Med. Univ.-Klinik, Tübingen. Paper. Price, 15 marks. Pp. 227, with 54 illustrations. Leipsic: S. Hirzel, 1926.

Practical consideration of roentgen-ray therapy.

YEAR-BOOK OF PHARMACY. Comprising official information respecting the Pharmaceutical Society of Great Britain. Scientific Abstracts relating to pharmacy, materia medica, and chemistry, covering the period October, 1924, to October, 1925; with the transactions of the British Pharmaceutical Conference at its 62nd annual meeting July, 1925. London, 1925.

HEALTH HEROES: EDWARD LIVINGSTON TRUDEAU. By Grace T. Hallock and C. E. Turner, Associate Professor of Biology and Public Health, Massachusetts Institute of Technology. Paper. Pp. 24, with illustrations. New York: Metropolitan Life Insurance Company, 1926.

CHILD LABOR IN FRUIT AND HOP GROWING DISTRICTS OF THE NORTHERN PACIFIC COAST. By Alice Channing. U. S. Department of Labor, Children's Bureau. Bureau Publication No. 151. Pp. 52, with illustrations. Washington: Government Printing Office, 1926.

HEALTH HEROES: LOUIS PASTEUR. By Grace T. Hallock and C. E. Turner, Associate Professor of Biology and Public Health, Massachusetts Institute of Technology. Paper. Pp. 32, with illustrations. New York: Metropolitan Life Insurance Company, 1925.

INTRODUCTION À L'ÉTUDE DE LA PSYCHOGÉNÈSE. Essai de biopsychologie évolutive. Par le Dr. Maurice Dide, Directeur-médecin des Asiles d'aliénés. Paper. Price, 12 francs. Pp. 221. Paris: Masson & Cie, 1926.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH OF THE MEDICAL SOCIETY, COUNTY OF KINGS ON PERIODIC MEDICAL EXAMINATIONS OF APPARENTLY HEALTHY PERSONS. Brooklyn, 1926.

POOR RELIEF IN PENNSYLVANIA. A State-Wide Survey. By Emil Frankel. Commonwealth of Pennsylvania, Department of Welfare. Bulletin 21. Harrisburg, 1925.

TRANSACTIONS OF THE THIRTY-FIRST ANNUAL MEETING OF THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY, INC., 1925. The Society, 1925.

PROCEEDINGS OF THE INTER-STATE POST GRADUATE MEDICAL ASSEMBLY OF NORTH AMERICA. St. Paul, Minnesota, October, 1925. Milwaukee, 1926.

REPORT OF THE FORTY-EIGHTH ANNUAL MEETING OF THE AMERICAN BAR ASSOCIATION. September, 1925. Baltimore, 1925.

ANNUAL REPORT OF THE GENERAL EDUCATION BOARD. 1924-1925. New York: General Education Board, 1926.

TRANSACTIONS OF THE AMERICAN GYNECOLOGICAL SOCIETY. Volume 50. For the year 1925. Philadelphia, 1925.

Medicolegal

Indemnity Insurance of Alleged Charitable Hospital

(Levy v. Superior Court of California in and for the City and County of San Francisco (Calif.), 239 Pac. R. 1100)

The District Court of Appeal of California, first district, division 1, says that an action was commenced by one Mae Kilroy Kane against the Mount Zion Hospital, a corporation, and others to recover damages for bodily injuries alleged to have been caused by the negligence of the corporation and its servants in the care and treatment of the plaintiff while a patient in the hospital conducted by the corporation. The corporation denied negligence and as a further defense alleged that it was organized and existed solely for charitable and nonprofit purposes, and that the hospital was operated solely for such purposes. That the plaintiff, desiring to take the deposition of the secretary of the corporation, had a subpena issued requiring his appearance before the court and that he bring a certain policy of indemnity insurance. He appeared as required, but, notwithstanding direction by the court to answer, refused to answer questions asked him as to whether he had brought with him the indemnity insurance policy, and whether the corporation carried a policy which insured it against the consequences of the negligent acts of its employees. He was then adjudged guilty of contempt of court, and thereafter instituted this proceeding to review the judgment of the court, which is annulled, because it is considered that the evidence would not be admissible for any purpose under the pleadings and that therefore the court was without jurisdiction to adjudge him guilty of contempt.

One of the contentions was that, assuming the corporation to be a charity as alleged, the policy in question protected the trust fund against depletion, and that therefore the reason for the rule, if any, exempting the corporation from liability, and based on the fact of the trust fund, failed. But no authorities holding in accordance with the argument of counsel in this behalf were called to the attention of the district court of appeal; and it is this court's opinion that the theory that a charity, not otherwise subject to liability, may become liable by reason of the procurement by those administering it of indemnity insurance cannot be supported in principle.

It was further contended that the policy would be admissible as evidence tending to show the character of the corporation and the manner of conducting the hospital. The character of the corporation was to be determined not alone by the powers and purposes defined in its articles of incorporation, but also by the method of transacting the business of the hospital. As a general rule, any facts having rational probative value would be admissible for that purpose; and it was urged that the policy would be relevant as the basis for certain inferences, in that the act of the officers of the corporation in procuring the insurance policy would be evidence of their consciousness that the corporation was not a charity as alleged, and that the hospital was not being conducted for such purposes, but for purposes making necessary or proper the procurement of insurance protecting the corporation from the possible legal consequences of its conduct, and from such consciousness might be inferred the ultimate fact sought to be shown. However, while the evidence offered had indirectly a degree of probative value on the issue as to the character and purposes of the corporation, the ultimate conclusion sought to be drawn therefrom was not the plain or most probable one, and the weight which might fairly be given thereto would not overcome the well settled reasons of policy for the exclusion of evidence of this character; and when the uncertainty as to the rule to be applied to facts such as were alleged in the pleadings mentioned was considered, it appears to the district court of appeal that the act of the corporation in procuring a policy of the character assumed could be the basis for no reasonable inference other than that, as a prudent trustee, in view of such uncertainty, it deemed such protection necessary and proper, pending action by the legislature or a final deter-

mination of the question by the courts. The uncertainty referred to the court described as that indicated by the language in *Stewart* v. *Cal. Medical, etc., Assn*, 178 Cal. 418, 423, 176 Pac. 46, which had been cited as authority for the contention that, assuming the allegations as to the character and purposes of the corporation to be true, the rule of exemption from liability for the negligent acts of the employees of a charity has not been adopted as the rule in California, a question with which the court says that it was not concerned at this time.

Putting of Baby in Evidence for Inspection

(Thorne v. State (Ala.), 105 So. R. 709)

The Court of Appeals of Alabama, in affirming a judgment of conviction of defendant Thorne on a charge of seduction, says that the state was permitted, over the objections of the defendant, to make profert of, or put in evidence for inspection, the baby which was alleged to have been born as the result of the alleged seduction. Thus, for the first time, so far as this court could find, was the question of the profert of a baby in a seduction case presented squarely to the court. It is to be conceded that, even in bastardy cases, the authorities are in conflict. But in a bastardy proceeding it has been held in Alabama that it is competent to make profert of the baby, after proper identification, to show resemblance to the reputed father. Still the uncertainty of this character of proof is everywhere conceded, and, but for the Alabama decisions on the subject, this court might be inclined to hold otherwise. Yet, however unsatisfactory it may be, where, as in this case, the question of the paternity of the child becomes relevant for any purpose, the jury should have the benefit of a personal inspection of the child that through the sense of sight the jury may draw its own conclusions as to a resemblance between the defendant and the baby. If there had been no denial of intercourse at the time as testified to by the prosecutrix, a different rule might apply; but in this case the defendant denied the cohabitation, so that, if the child born as a result of intercourse at about the time testified to by the prosecutrix was of such resemblance to the defendant as to impress the jury that the child was the defendant's, such evidence would corroborate the testimony of the prosecutrix and tend to an impeachment of the defendant's statement that he did not have intercourse with the prosecutrix. So that, if the admission of this testimony was technically inadmissible at the time of its admission, it became legal after all the facts had been brought out. Profert of the baby was properly allowed. The child being in evidence for inspection, it was permissible for the solicitor to take it in his arms and exhibit it before the jury. It was also competent to prove by a qualified physician the period of average gestation, which would tend to corroborate the testimony of the prosecutrix as to the intercourse.

Disease as an Accidental Injury—Case of a Cold

(Lerner et al. v. Rump Bros. et al. (N. Y.), 149 N. E. R. 334)

The Court of Appeals of New York, in reversing an order which affirmed an award under the workmen's compensation law, says that the state industrial board found that on June 2 the employee in showing fruit and vegetables to a customer was ten minutes in a refrigerator and received a chill that naturally and unavoidably caused a cold to develop, which lowered his disease resisting power, and, as a result, pulmonary edema and cerebral embolism and septic endocarditis developed and caused his death, November 22. The question was whether, on the facts found, the conclusion could be reached that the employee's death was due to an accidental injury which arose out of his employment within the meaning of the compensation law. Death was due to disease. The disease was not an occupational disease, the natural and unavoidable result of the employment. A distinction exists between accidental injury and disease, but disease may be an accidental injury. The exception arises out of abnormal conditions which must be established to sustain an award. Two concurrent limitations have been placed on the right to recover an award when a disease not the natural and unavoidable result of the employment is developed during the course of the employment, although it does not follow that compensation should be awarded in all cases coming literally within these limitations. First, the inception of the disease must be assignable to a determinate or single act, identified in space or time. Secondly, it must also be assignable to something catastrophic or extraordinary. It has been held in this state that cases of voluntary prolonged contacts resulting in disease are to be excluded from the field of accidental injuries.

In this case a causal connection was sought between the exposure to the cold of the refrigerating plant for ten minutes and the death of the employee as the result. The temperature of the plant must have been less than the freezing point of fruits and vegetables, and the outside temperature was probably not excessive, June 2. The exposure, although occurring at a definite time and place, was not catastrophic or extraordinary. It was like the exposure to drafts when one is heated while at work, or to the change between the cold and wet outside and the warmth inside, which is not infrequently encountered by the workman after coming to his work in inclement weather. Such contacts of the body with the draft or with changes of temperature are natural and normal, and often unavoidable in the conduct of a business. A resulting cold would present itself as a disease and not as an accident.

While it may be difficult to make nice and exact discriminations between disease as an accidental injury and disease which is neither accidental nor an injury in the common acceptance of the terms, it is not difficult to distinguish a case of ordinary exposure resulting in a cold from a case of emergent, prolonged exposure. The definite event here was the change from a hot room to a cold one, as if one should step out of a hot room into the cold in the winter without adequate protection. To call the sequent cold an accidental injury would be to distort the fair meaning of the statute and the underlying principle of compensation cases. The award in this case should be vacated, and the claim dismissed.

Conclusiveness of Expert Testimony

(William Simpson Const. Co. et al. v. Industrial Accident Commission et al. (Calif.), 240 Pac. R. 58)

The District Court of Appeal of California, second district, division 1, in annulling an award of compensation made under the workmen's compensation act for the death of an employee of the construction company who fell from a scaffold about 12 feet from the ground and died about one and one-half hours thereafter, says that the physicians who performed a necropsy the next day found an extensive subdural hemorrhage covering the base and lateral surfaces of the brain, and a basal fracture running across the base of the middle fossa of the skull. The physicians further found a pontile hemorrhage in the brain, which they testified was caused by a stroke of apoplexy, and they gave as their opinion that the stroke preceded and was the cause of the fall, and was therefore the proximate cause of the man's death. The industrial accident commission, however, disregarded the opinion of the medical experts, and found that the fracture of the skull caused by the fall and the subdural hemorrhage from it were the proximate cause of the man's death, and made an award in favor of his dependents. Against this it was contended that the commission was without authority to reject the uncontradicted testimony of the medical experts and to render an award based on a finding that death was due to a cause other than that given therefor by the experts.

In California it has frequently been held that the proper or usual practice and treatment by a physician or surgeon in the examination and treatment of a wound or injury is a question for experts, and can only be established by their testimony. The rule to be drawn from these decisions, as this court understands them, appears to be that whenever the subject under consideration is one within the knowledge of experts only, and is not within the common knowledge of laymen, the expert evidence is conclusive on the question in issue. It follows that in such cases neither the court nor the jury can disregard such evidence of experts, but, on the other hand, they are bound by such evidence, even if it is contradicted by nonexpert witnesses. The same rule would, of course, apply to a proceeding before the industrial accident

commission. Under this rule, the commission, in the present proceeding, could not reject the evidence of the medical experts when testifying on any subject peculiarly within their own knowledge. The same rule would apply as to opinions of the medical experts on a subject solely within their professional knowledge, and not within the knowledge of the ordinary individuals.

In this proceeding the evidence of the medical experts as to the condition of the man's skull at the time of the necropsy, and the presence therein of the fracture, and the two hemorrhages, the extent and character of these hemorrhages, and their origin and cause, and their probable effect on the man, and whether they, or either of them, was sufficient to produce death, dealt entirely with matters with which only medical men are familiar, and concerning which they alone could give any intelligent information to the commission. This evidence, being uncontradicted, was binding on the commission, and, according to the foregoing rule, the latter could not reject the same and act on their own knowledge or conclusions. But no one saw the man immediately preceding or at the time of the fall. There was nothing in the appearance or condition of either hemorrhage to indicate which one occurred first in point of time. The physicians testified that either one was sufficient to cause death. The only reason assigned for the opinion that the fall was preceded by the stroke of apoplexy was that the pontile hemorrhage was not traumatic. Under all the circumstances, the court thinks that the opinion of the physicians that the stroke of apoplexy occurred prior to the fall was mere conjecture on their part and not based on any evidence warranting such a conclusion, wherefore the commission was not bound by that opinion. However, the award made by the commission could not be sustained by this court, because, if the evidence before the commission was insufficient to justify the expert witnesses in concluding that apoplexy was the proximate cause of the man's death, for like reasons it was insufficient to justify a conclusion on the part of the commission that death was due to the fall, uninfluenced and uninduced by the stroke of apoplexy. With the evidence in such a state, any opinion as to the proximate cause of death was a mere surmise and conjecture and not based on any foundation sufficient to support a finding of fact. Hearing denied by supreme court.

Use of Unverified Notes Interpreting Roentgenograms

(Vincent v. Otis Elevator Co. et al. (N. Y.), 212 N. Y. Supp. 76)

The Supreme Court of New York, Appellate Division, Third Department, on this appeal from an award by the state industrial board of compensation under the workmen's compensation law, tersely says: Award reversed, and matter remitted, with costs against the state industrial board to abide the event, on the ground that the finding that the claimant at the date of the accident was suffering from a tuberculous condition, which became activated by the accidental injury, was based on certain notes interpreting roentgen-ray pictures made by a physician who was not called to verify the pictures or the notes, and was therefore grounded on other than legal evidence.

Society Proceedings

COMING MEETINGS

Alabama, Medical Association of the State of, Mobile, April 27-30. Dr. D. L. Cannon, 519 Dexter Avenue, Montgomery, Assistant Secretary.

American Association of Genito-Urinary Surgeons, Hot Springs, Va., May 10-12. Dr. H. G. Bugbee, 40 E. 41st Street, New York, Secretary.

American Association of Industrial Physicians and Surgeons, Philadelphia, May 24-26. Dr. F. L. Rector, 22 East Ontario Street, Chicago, Secretary.

American Bronchoscopic Society, Montreal, Canada, May 29. Dr. Henry B. Orton, 671 Broad Street, Newark, N. J., Secretary.

American Child Health Association, Atlantic City, May 17-22. Dr. S. J. Crumbine, 370 7th Ave., New York City, Secretary.

American Dermatological Association, Niagara Falls, Canada, May 27-29. Dr. C. Guy Lane, 416 Marlborough Street, Boston, Secretary.

American Gastro-Enterological Association, Atlantic City, May 3-4. Dr. John Bryant, 338 Marlborough Street, Boston, Secretary.

American Gynecological Society, Stockbridge, Mass., May 20-22. Dr. A. H. Curtis, 104 S. Michigan Ave., Chicago, Secretary.

American Laryngological Association, Montreal, Canada, June 3-5. Dr. George M. Coates, 1811 Spruce Street, Philadelphia, Secretary.

American Laryngological, Rhinological, and Otological Society, Montreal, Canada, May 31-June 2. Dr. Robert L. Loughran, 145 West 58th Street, New York, Secretary.

American Neurological Association, Atlantic City, June 1-3. Dr. Henry A Riley, 870 Madison Avenue, New York, Secretary.

American Ophthalmological Society, Hot Springs, Va., June 14-16. Dr. Emory Hill, Professional Building, Richmond, Va., Secretary.

American Orthopedic Association, Atlanta, April 26-28. Dr. De Forest P. Willard, 1630 Spruce Street, Philadelphia, Secretary.

American Otological Society, Montreal, Canada, May 31-June 3. Dr. Harold Walker, 390 Commonwealth Avenue, Boston, Secretary.

American Pediatric Society, Niagara Falls, Canada, May 31-June 2. Dr. Howard Childs Carpenter, 1805 Spruce Street, Philadelphia, Secretary.

American Psychiatric Association, New York City, June 8-11. Dr. Earl D. Bond, 4401 Market Street, Philadelphia, Secretary.

American Psychopathological Association, New York City, June 11. Dr. Sanger Brown II, 173 East 70th Street, New York City, Secretary.

American Roentgen Ray Society, Detroit, May 18-22. Dr. C. L. Martin, Baylor Hospital, Dallas, Texas, Secretary.

American Society of Clinical Investigation, Atlantic City, May 3. Dr. J. H. Austin, University of Pennsylvania, Philadelphia, Secretary.

American Surgical Association, Detroit, May 24-26. Dr. R. B. Greenough, 8 Marlborough Street, Boston, Secretary.

American Therapeutic Society, Philadelphia, June 10-12. Dr. W. J. Mallory, 1720 Connecticut Ave., N. W., Washington, D. C., Secretary.

American Urological Association, Boston, May 17-19. Dr. H. G. Hamer, 723 Hume-Mansur Building, Indianapolis, Ind., Secretary.

Arizona Medical Association, Globe, April 25-27. Dr. D. F. Harbridge, 407 Goodrich Building, Phoenix, Secretary.

Arkansas Medical Society, Hot Springs, May 18-20. Dr. W. R. Bathurst, 810 Boyle Building, Little Rock, Secretary.

Association of American Physicians, Atlantic City, May 4-5. Dr. F. W. Peabody, Boston City Hospital, Boston, Secretary.

California Medical Association, Oakland, April 26-May 1. Dr. Emma W. Pope, 593 Market Street, San Francisco, Secretary.

Conference of State and Provincial Health Authorities, Atlantic City, N. J., May 21-22. Dr. Richard M. Olin, State Commissioner of Health, Lansing, Mich., Secretary.

Connecticut State Medical Society, New Haven, May 19-20. Dr. C. W. Comfort, Jr., 27 Elm Street, New Haven, Secretary.

Florida Medical Association, Gainesville, May 3-5. Dr. Shaler Richardson, 111 W. Adams Street, Jacksonville, Secretary.

Georgia, Medical Association of, Albany, May 12-15. Dr. A. H. Bunce, 65 Forrest Avenue, Atlanta, Secretary.

Hawaii Territorial Medical Association, Honolulu, April 25-28. Dr. F. J. Pinkerton, 46 Young Building, Honolulu, Secretary.

Illinois State Medical Society, Champaign, May 18-20. Dr. H. M. Camp, Lahl Building, Monmouth, Secretary.

Iowa State Medical Society, Des Moines, May 12-14. Dr. T. B. Throckmorton, Bankers Trust Building, Des Moines, Secretary.

Kansas Medical Society, Kansas City, May 4-6. Dr. J. F. Hassig, 804 Elks Building, Kansas City, Secretary.

Maine Medical Association, Poland Springs, June 10-12. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.

Maryland, Medical and Chirurgical Faculty of, Baltimore, April 27-29. Dr. J. A. Chatard, 1211 Cathedral Street, Baltimore, Secretary.

Massachusetts Medical Society, Springfield, June 8-9. Dr. W. L. Burrage, 182 Walnut Street, Brookline, Secretary.

Medical Library Association, Ann Arbor, Mich., June 8-9. Miss Harriet Wilson, 535 North Dearborn Street, Chicago, Secretary.

Minnesota State Medical Association, St. Paul, May 17-19. Dr. E. A. Meyerding, 11 W. Summit Avenue, St. Paul, Secretary.

Mississippi State Medical Association, Jackson, May 11-13. Dr. T. M. Dye, McWilliams Building, Clarksdale, Secretary.

Missouri State Medical Association, St. Louis, May 17-20. Dr. E. J. Goodwin, 901 Missouri Building, St. Louis, Secretary.

National Association for the Study of Epilepsy, New York City, June 7-8. Dr. A. L. Shaw, 108B The Albiston, Utica, N. Y., Secretary.

Nebraska State Medical Association, Omaha, May 11-13. Dr. R. B. Adams, McKinley Building, Lincoln, Secretary.

New Hampshire Medical Society, Concord, May 25-26. Dr. D. E. Sullivan, 7 North State Street, Concord, Secretary.

New Jersey, Medical Society of, Atlantic City, June 17-19. Dr. J. B. Morrison, 97 Halsey Street, Newark, Secretary.

New Mexico Medical Society, Albuquerque, May 19-21. Dr. C. M. Yater, 310 N. Richardson Avenue, Roswell, Secretary.

North Carolina, Medical Society of the State of, Wrightsville Beach, June 15-17. Dr. L. B. McBrayer, Southern Pines, Secretary.

North Dakota State Medical Association, Minot, May 25-26. Dr. A. J. McCannell, Minot, Secretary.

Ohio State Medical Association, Toledo, May 11-13. Mr. Don K. Martin, 131 E. State Street, Columbus, Executive Secretary.

Rhode Island Medical Society, Providence, June 3. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

South Dakota State Medical Association, Aberdeen, May 19-20. Dr John F. D. Cook, Langford, Secretary.

Tennessee State Medical Association, Memphis, May 11-13. Dr. J. F. Gallagher, Jackson Building, Nashville, Secretary.

Texas, State Medical Association of, Houston, May 24-27. Dr. Holman Taylor, 207½ West 11th Street, Fort Worth, Secretary.

Utah State Medical Association, Salt Lake City, May 6-8. Dr. F. B. Steele, Boston Building, Salt Lake City, Secretary.

West Virginia State Medical Association, Morgantown, May 25-27. Mr. S. O. Neale, 211 Smallridge Building, Charleston, Executive Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in America for a period of three days. No foreign journals are available prior to 1921, nor domestic prior to 1923. Periodicals published by the American Medical Association are not available for lending, but may be supplied on order. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Physiology, Baltimore

75: 533-709 (Feb.) 1926

*Is Vitamin A Secreted Through Skin? Vitamin A in Wool Fat. S. V. Gudjonsson, Copenhagen, Denmark.—p. 533.
*Influence of Testes on Metabolism. E. P. Bugbee and A. Simond, Detroit.—p. 542.
Capillary Pressure in Frog Mesentery as Determined by Micro-Injection Methods. E. M. Landis, Philadelphia.—p. 548.
*Blood Diastases in Depancreatized Dogs. J. Markowitz and H. B. Hough, Toronto.—p. 571.
Effect of Thyroidectomy on Some Unconditioned Responses of Sheep and Goat. H. S. Liddell, Ithaca, N. Y.—p. 579.
Stereoscopic Projection and Ridgway's Standards as Methods of Investigating Color Blindness. T. W. Wingate, H. D. Iler and D. A. Chambers, Cleveland.—p. 591.
Physiology of Sleep. IV. Effect of Sleep on Respiration. C. I. Reed and N. Kleitman, Chicago.—p. 600.
Action of Insulin on Domestic Fowl. G. J. Cassidy, S. Dworken and W. H. Finney, Montreal.—p. 609.
Physiologic Action of Light. VI. Alterations in Cell Electrophoretic Potential Produced by Direct Irradiation of Blood in Vivo. I. S. Falk and C. I. Reed, Chicago.—p. 616.
*Cholesterol and Phosphatide Metabolism in Pregnancy. E. J. Baumann and O. M. Holly, New York.—p. 618.
Cholesterol and Phosphatide Distribution in Some Tissues of Pregnant and Nonpregnant Rabbits. E. J. Baumann and O. M. Holly, New York.—p. 633.
*Effect of Pancreatectomy on Secretion of Succus Entericus. W. Koslowski and A. C. Ivy, Chicago.—p. 640.
Nutrition of White Mouse. H. H. Beard, New Haven, Conn.
I. Normal Growth and Nutritive Requirements.—p. 645.
II. Effect of Feeding Diets Rich in Protein and Diets Containing Unbalanced Salt Mixtures. Rôle of Certain Sulphur Components.—p. 658.
III. Vitamin Factors in Nutrition of Mice.—p. 668.
IV. Relation Between Diet and Reproduction.—p. 682.
Mineral Metabolism Studies with Dairy Cattle: Mineral Equilibrium During Gestation. H. G. Miller, W. W. Yates, R. C. Jones and P. M. Brandt, Corvallis, Ore.—p. 696.

Vitamin A in Wool Fat.—Argentine wool fat was proved by Gudjonsson not to contain vitamin A. Icelandic wool fat proved to contain vitamin A in rather large quantities. The vitamin A was destroyed on heating. It is thought probable that vitamin A is secreted through the skin.

Influence of Testes on Metabolism.—Experiments made by Bugbee and Simond with a castrated male dog failed to show that castration in itself reduces the basal metabolic rate. Other factors to be considered are lack of psychic stimulation, lack of muscular exercise, adaptation of the nervous system and endocrine gland system to a life calling for less metabolism than in an active normal life.

Blood Diastases in Depancreatized Dogs.—No facts were elicited by Markowitz and Hough which would justify the employment of blood diastase estimations in clinical diabetes.

Cholesterol and Phosphatide Metabolism in Pregnancy.—The lipoidemia of human pregnancy is explained by Baumann and Holly as a reaction similar to those called forth by any intoxication, and reasons for the different findings in man and the rabbit are suggested.

Effect of Pancreatectomy on Succus Entericus.—Koskowski and Ivy assert that total pancreatectomy does not materially affect the quantity of the secretion of succus entericus. The invertase content is definitely increased from three to seven days, but fluctuates, and then there is a tendency for it to return to a level slightly above normal. Total pancreatectomy causes a temporary decrease in the amylase content of succus entericus, but has no effect on the lipase content. For the first eighteen days following pancreatectomy, no compensatory changes occur in the secretion of succus entericus which would facilitate intestinal digestion.

American Journal of Roentgenology and Radium Therapy, New York

15: 1-92 (Jan.) 1926

Dosage Study Relative to Therapeutic Use of Unfiltered Radion. G. Failla, F. Adair, E. H. Quimby, K. Sugiura, C. Arnell and W. Goldsmith, New York.—p. 1.
Treatment of Epithelioma of Penis with Radium and Roentgen Rays. A. L. Dean, New York.—p. 36.
Malignant Tumors of Testis. E. L. Keyes, New York.—p. 44.
Complete Insulation Versus Grounding as Protection Against High Tension Electric Shocks. W. F. Hemler, Washington, D. C.—p. 49.
*Roentgen-Ray Study of Bronchiectasis. J. J. Singer and E. A. Graham, St. Louis.—p. 54.
*Secondary Evidence of Gallbladder Disease. W. W. Belden, New York.—p. 58.
*Demonstration of Bronchial Tree by Intratracheal Injections of Lipiodol. H. W. Grady, Washington, D. C.—p. 65.
New Devices for Implantation and Removal of Radium Needles. H. Wachtel, Cracow, Poland.—p. 76.

Drainage for Bronchiectasis.—Singer and Graham advise that postural drainage be instituted in bronchiectatic cases after the first plate is taken. Subsequent plates will give information as to the relative size of the bronchiectatic area.

Secondary Evidence of Gallbladder Disease.—The importance of the findings of indirect signs of gallbladder disease are emphasized by Belden. He says that no gallbladder examination is complete without a roentgenoscopic examination of the stomach and duodenum and a roentgenographic examination when possible, because the filling defects caused by adhesions and pressure from a distended gallbladder very markedly increase the percentage of diagnosis of gallbladder disease.

Lipiodol in Lung Examinations with Roentgen Ray.—Grady has used lipiodol for the purpose of demonstrating bronchiectasis and lung abscess. The intercricothyroid route was used in all cases. Roentgenograms are made immediately after the injection. The greater part of the lipiodol is eliminated by coughing within a few hours after the injection. The remainder gradually disappears, usually in from one to two weeks. In one case a small amount remained in the lung four months after the injection. No immediate or late ill effects of any importance have been observed.

American Review of Tuberculosis, Baltimore

13: 97-191 (Feb.) 1926

*Vital Staining in Experimental Tuberculosis. R. H. Jaffe, Chicago.—p. 97.
Reaction and Growth Curves of Cultures of Tubercle Bacilli. R. R. Henley, Washington, D. C.—p. 107.
*Unsuccessful Attempts to Cure or Prevent Tuberculosis in Guinea-Pigs with Dreyer's Defatted Antigen. M. Nevin, F. R. Bittman and E. L. Hazen, New York.—p. 114.
*Latent Tuberculosis in Childhood. VI. F. Eberson, San Francisco.—p. 124.
Extrapleural Thoracoplasty. L. S. Peters, Albuquerque, N. M.—p. 149.
*Artificial Pneumothorax. A. Swezey and A. Schonbar, Denver.—p. 156.
Accidental Pneumothorax Complicating an Attempt to Induce Artificial Pneumothorax. S. Simon, Denver.—p. 168.
Metallic Sound. H. M. Kinghorn, Saranac Lake, N. Y.—p. 175.

Vital Staining in Experimental Tuberculosis.—Jaffe asserts that most intensive vital staining of rabbits with india ink or colloidal iron does not prevent the formation of tubercles. This observation is not in accordance with the possibility of a functional elimination of cells by the granular storage of foreign material. The decrease of the dye in the growing tubercle, and its absence under certain conditions in larger tubercles, does not result from a diminished vitality of the epithelioid cells, but is due to the lack of proper circulation.

Dreyer's Defatted Antigen in Tuberculosis.—The defatted antigen prepared according to Dreyer's method failed to show either therapeutic or prophylactic benefit when injected by Nevin and his associates into tuberculous guinea-pigs. On the contrary, animals treated with the vaccine died earlier than the untreated controls.

Latent Tuberculosis in Childhood.—One hundred and forty-five cases of juvenile tuberculosis have been studied by Eberson with regard to history, age groups, symptomatology, physical and roentgen-ray findings and tuberculin reactions. It would appear that pulmonary foci are frequently overlooked. The pulmonary foci were found in 46.5 per cent of the patients in this study, and of these, 71.6 per cent showed calcification of the focus or of the adjacent intrapulmonary

lymph nodes. Peribronchial tuberculosis of the nature of definite pathologic changes or adjacent to bronchial ramifications was demonstrated by the roentgen ray in 5 per cent of the cases. Mediastinal adenopathy of clinical significance could be shown with the aid of lateral roentgenograms. There was a complete correlation between positive tuberculin tests and clinical and roentgen-ray findings, which warranted the diagnosis of latent or active tuberculosis. Quantitative intracutaneous tests with bovine and human tuberculins demonstrated the following: 73 per cent reacted more violently or solely to bovine tuberculin; 26 per cent reacted more strongly to human tuberculin, and 1 per cent reacted to human tuberculin only. Lymphangitis accompanying tuberculin tests occurred in three additional cases. Interpretation of the test depends on the kind of tuberculin used, and a test is of value only when made with derivatives of tuberculin which contain an active principle that is as yet not clearly determined. Quantitative comparable results can be obtained by the use of highly graduated dilutions of different types of tuberculin when these have been standardized previously. Eberson believes that the value of a positive tuberculin test in the presence of adenopathy cannot be doubted if it be remembered that the self-same diseases of childhood which may cause nonspecific adenopathy are known to "extinguish" tuberculin reactions.

Artificial Pneumothorax.—The data obtained by Swezey and Schonbar from a study of 207 cases of artificial pneumothorax are not considered convincing enough to justify definite conclusions as to the indications and contraindications for artificial pneumothorax treatment. The best results were obtained in cases in which a successful collapse was secured, with the contralateral lung only slightly involved, and which were free of serious complications interfering with the nutrition of the patient, such as enteritis or active laryngitis. Advanced lesions in the "good" lung contraindicate the treatment. As to all the cases, while the balance of evidence seems to be slightly in favor of the treatment, yet, considering especially the frequency of complications resulting from this treatment in such cases, it is probably best not to be too optimistic about it unless the treatment becomes imperative for the purpose of controlling hemoptysis. A reasonable trial should be given first to other forms of immobilization, such as strict bed rest, posture treatment or the chest belt.

Archives of Dermatology and Syphilology, Chicago

13: 137-300 (Feb.) 1926

*Creeping Eruption. J. L. Kirby-Smith, W. E. Dove and G. F. White, Jacksonville, Fla.—p. 137.
*Physical Allergy as Cause of Dermatoses. W. W. Duke, Kansas City. —p. 176.
*Cutaneous Reaction in Leishmaniasis. J. Montenegro, São Paulo, Brazil. —p. 187.
*Bismuth Salicylate in Experimental Rabbit Syphilis. O. M. Gruhzit, Detroit.—p. 195.
*Gastric Acidity in Acne Vulgaris. F. C. Knowles and H. B. Decker, Philadelphia.—p. 215.
*Intramuscular Absorption of Some Insoluble Bismuth Compounds as Revealed by Roentgen Ray. H. N. Cole, H. L. Farmer and H. Miskdjian, Cleveland.—p. 219.
Epilation in Mice as Biologic Standard for Determining Roentgen-Ray Dosage. H. H. Hazen and L. C. Milstead, Washington, D. C.—p. 230.
*Intravenous Administration of Sulpharsphenamine in Syphilis. M. F. Lautman, Hot Springs, Ark.—p. 234.
*Ultraviolet Light Treatment of Roentgen-Ray Telangiectases. C. G. Lane, Boston.—p. 237.

Parasite in Creeping Eruption.—Five microscopic nematode parasites have been recovered by Kirby-Smith, Dove and White, from serial sections of skin tissue excised from patients with creeping eruption. This is the first recovery of the nematode from lesions of creeping eruption. It has been given the name *Agamonematodum migrans* by the authors. Cases in persons most extensively infested have originated underneath buildings when men at work were wet with perspiration and were in contact with the damp sandy soil. Minor infections have often occurred in children playing in low areas where apparently surface drainage had disseminated the parasites. The inability to locate the parasite definitely has much to do with the difficulty experienced in treatment. When the parasite has invaded the sole or the palm, the difficulty is increased. Ethyl acetate applied on cotton or gauze or used in a flexible collodion has been effective in many cases. Refrigeration with ethyl chloride, carbon dioxide snow, or crushed ice with salt has been used successfully.

Physical Allergy as Cause of Dermatoses.—Physical allergy is a name suggested by Duke for altered reaction caused specifically by the action of physical agents such as light, heat, cold and mechanical irritation, and in the case of heat sensitiveness, indirectly by the effect of mental or physical exertion. The reactions produced are of two varieties: (1) contact reactions and (2) reflex-like reactions. The cutaneous symptoms vary with the degree of sensitiveness of the patient and with the intensity of the exposure.

Cutaneous Reaction in Leishmaniasis.—Intradermal injections of an alkaline extract of *Leishmania* were given by Montenegro to thirty-seven patients with leishmaniasis, and positive reactions were obtained in thirty-two of them, or 86.5 per cent. Injections with the same extract were also given to thirty-six persons free from leishmaniasis. Of these, thirty-three developed negative reactions, and three showed a certain reaction definitely distinct from the specific reactions obtained with the patients who had leishmaniasis.

Bismuth Salicylate in Syphilis.—The results of Gruhzit's experimental work lead him to conclude that bismuth salicylate possesses high spirocheticidal power and causes no pain or irritation at the site of injection; its rate of absorption appears to be better than that of metallic suspensions and is equal to that of tartrobismuthates.

Gastric Acidity in Acne Vulgaris.—Twenty-five patients with acne vulgaris, varying in duration, type and severity, were examined by Knowles and Decker for total and free hydrochloric acidities by the fractional gastric analysis method. Ten cases showed a total acidity below 50, seven between 50 and 60, four between 60 and 70 and the remaining four above 70. The acid values apparently had no relation to the duration, type or severity of the condition. Patients with a low acidity were improved when given a mixture containing dilute hydrochloric acid.

Intramuscular Absorption of Insoluble Bismuth Compounds.—The findings of Cole et al. indicate that injections of metallic bismuth are dangerous and if persisted in will lead to cumulative absorption and possibly even to fatal results. The same is probably true, although to a lesser extent, of bismuth oleate. Bismuth salicylate, likewise, is not above this objection, and its use should be replaced by one of the more soluble bismuth salts—perhaps the potassium-bismuth tartrate preparations. These salts, especially if injected intragluteally, once a week, are probably not so likely to give rise to cumulative action. However, the patient should be observed closely, as even this salt is not above criticism so far as its absorption is concerned. The contention that insoluble bismuth salts must be injected twice weekly, in the authors' opinion, is open to question, as only a small amount of the salt will be absorbed, at the most. Moreover, too frequent deposits may lead to cumulative action, toxic symptoms and even the death of the patient.

Sulpharsphenamine Intravenously in Syphilis.—Very good results are reported by Lautman from the use, intravenously, of sulpharsphenamine. In cases of syphilis which are Wassermann-negative and free from clinical symptoms, sulpharsphenamine seems quite as capable of controlling the disease as the older arsenicals. In neural syphilis sulpharsphenamine is even more effective than arsphenamine or neoarsphenamine. Given intravenously, sulpharsphenamine did not produce dermatitis and caused practically no constitutional reactions. Lautman says that on account of the absence of disagreeable reactions patients submit more willingly to treatment with sulpharsphenamine, and, consequently, it is indicated in cases in which the maximum spirocheticidal effect of arsphenamine and neo-arsphenamine is not essential.

Ultraviolet Ray Treatment of Roentgen-Ray Telangiectases.—One case in point is reported by Lane. His experience prompts him to recommend that a proper dosage, three and one-half to four and one-half minutes, or enough to produce flaccid vesiculation, should be used; that proper intervals both between areas treated and dates of treatment be observed, and that areas of telangiectases without marked

atrophy and not too large can be benefited by ultraviolet ray treatment. The seriousness of traumatizing tissue already atrophic and degenerative by reason of an agent with a somewhat shorter wave length must be borne in mind, and the treatment should be undertaken with great caution, with a full knowledge of the abnormal tissue which is being treated, and with great care to prevent infection of the bullae and erosions produced by treatment.

Archives of Surgery, Chicago

12: 453-618 (Feb.) 1926

Prognosis and Treatment of 111 Fractures of Femur. A. P. C. Ashhurst and E. T. Crossan, Philadelphia.—p. 453.
*Umbilical Hernia: Operative Treatment. H. B. Stone, Baltimore.—p. 494.
*Coxa Vara. T. P. Noble and E. D. Hauser, Rochester, Minn.—p. 501.
*Gaucher's Disease: Case Showing Bone Disintegration and Joint Involvement. E. H. Cushing and A. P. Stout, New York.—p. 539.
*Fibrosarcoma of Thyroid. I. T. Zeckwer, Boston.—p. 561.
Gastric Motility. I. Origin and Character of Gastric Peristalsis. E. Klein, New York.—p. 571.
Id. II. Conduction of Gastric Peristaltic Wave. E. Klein, New York. —p. 583.
Pulmonary Blood Pressures. J. E. Scarff, Baltimore.—p. 591.
Report on Surgical Convalescence of Public Health Committee of New York Academy of Medicine.—p. 601.
Twenty-Eighth Report of Progress in Orthopedic Surgery. R. B. Osgood et al.—p. 604.

Operation for Umbilical Hernia.—The usual transverse elliptic incision is made by Stone surrounding the umbilicus and carried down to the anterior sheath of the rectus muscles all around. The neck of the sac is isolated, the sac opened, and its contents dealt with as conditions may require to secure reduction. Then the sac and skin immediately about the umbilicus are excised, leaving only a narrow margin of peritoneum about the hernial orifice. This orifice is not enlarged, but is closed by mattress sutures of strong silk or catgut so as to convert the oval or round orifice into a straight transverse line of closure. The second row of sutures is also a series of interrupted mattress stitches, overlapping the first row, which they bury, and forming another transverse line of closure over the first. The span of each of these stitches is about 1 cm. wider than the first row of stitches, so that when they are tied an inverted buttress of anterior sheath, about 1 cm. in depth, is turned inward over the first layer of closure. The point of especial emphasis is that this second row of sutures begins well laterally to each end of the first row, which simply closed the hernial orifice.

Coxa Vara: Etiology.—Noble and Hauser are of the opinion that there is considerable evidence that the pituitary gland plays an important part in this disease, and that trauma plays a minor part.

Gaucher's Disease.—Two new cases of Gaucher's disease are reported by Cushing and Stout. There was a considerable proportion of the cerebrosid kerasin in the spleen of one of these patients. This confirms the work of Lieb and Epstein. It seems reasonable to suppose that this substance is contained within the cytoplasm of the Gaucher cells. It has been demonstrated that the presence of the large cells in the bone marrow of the head and neck of the femur may result in a marked destruction of bone and produce a chronic osteoarthritis with sequestrum formation. Of the various types of treatment attempted, splenectomy is the only one that has been attended with any measure of success. The authors feel that there is no indication that the disease is cured by this procedure. It is their opinion that enough evidence does not exist to show that splenectomy actually prolongs life, although the figures suggest that it may. In the majority of cases, splenectomy does not result in an amelioration of symptoms; the general health and strength improve, and the tendency to bleed is diminished.

Fibrosarcoma of Thyroid.—The case described by Zeckwer was one of fibrosarcoma of the thyroid gland which showed rapid growth, involving the recurrent laryngeal nerve and producing massive metastases in the lungs. Proof of the fibroblastic origin of the tumor was offered by the demonstration of fibrils by histologic methods.

Boston Medical and Surgical Journal

194: 381-424 (March 4) 1926

Present Status of Effect of Organ Extracts on Control of Blood Pressure. W. J. MacDonald and T. C. Burnett, Boston.—p. 381.
*Cancer in Massachusetts. J. H. Nichols, F. W. Goodhue, M. E. Champion, G. H. Bigelow and H. L. Lombard, Boston.—p. 388.
*Etiology of Congenital Club Foot. C. Bearse, Boston.—p. 394.

Cancer in Massachusetts.—In compliance with a legislative resolve, the departments of public health and public welfare of Massachusetts made an investigation in 1925 on the cancer situation in Massachusetts. The significant findings were: cancer is on the increase, but there are indications that the peak of the curve may be nearly reached. Massachusetts had the highest death rate of any state in the union. The proportionate mortality for cancer among inmates of almshouses and insane institutions is lower than among the general population of the same age distribution. The cancer rate increased with density up to a population of about 4,000 per square mile. From there it remains nearly stationary. The cancer rate increases from west to east in Massachusetts. The average duration of life for patients operated on for cancer who die of cancer is 22.8 and for patients not operated on, 20. The average duration from onset to operation is 10.3 months. The average patient comes to a doctor eight months after first noticing symptoms. About one fourth of all cancer deaths occur in hospitals, but the length of stay in hospitals is too short to be considered adequate. The hospitals are increasing their share of the cancer load. There is need for additional beds for cancer cases as well as for all chronic diseases. Quacks are not a large factor in the inoperable cancer problem in Massachusetts. Further education of the public as to early diagnosis and treatment is necessary.

Etiology of Clubfoot.—The case cited by Bearse shows that it is possible to have a club foot deformity without any intrauterine conditions entering into it. The fetus was estimated to be 14 weeks old and had a single clubfoot.

Iowa State Medical Society Journal, Des Moines

26: 55-100 (Feb.) 1926

Diagnostic Net: Medical Viewpoint. F. G. Murray, Cedar Rapids.—p. 55.
*Treatment of Pernicious Anemia with Mercurochrome. P. B. McLaughlin, Sioux City.—p. 58.
Hydronephrotic Kidney. R. L. Latchem, Sioux City.—p. 60.
Perinephritic Abscess. R. H. Lott, Carroll.—p. 62.
Interpretation of Laboratory Reports. D. M. Griswold, Iowa City.—p. 66.
Rickets. L. R. DeBuys, New Orleans.—p. 68.
Pathology and Bacteriology of Putrid and Gangrenous Processes: Fusiform Bacilli and Vincent's Spirochete. D. J. Davis, Chicago.—p. 76.
Surgical Cases in Lower Abdomen and Pelvis. M. M. Ghent, St. Paul. —p. 80.
Ophthalmology and General Practitioner. J. S. Reynolds, Minneapolis. —p. 86.
Urea as Therapeutic Agent, Especially Postoperative. R. L. Fenlon, Clinton.—p. 87.

Mercurochrome in Treatment of Pernicious Anemia.—During the last eighteen months, McLaughlin has treated fourteen cases of pernicious anemia with intravenous injections of mercurochrome-220 soluble. He states positively that he can produce remissions in the disease more quickly, and that these remissions are more lasting, than with any other treatment. The patients apparently regain their strength and enjoy life. Some of them have taken up their former vocations, and by conserving energies and being more prudent in their ways of living, are now able to earn a livelihood. He is positive that the disease is an infection, the primary infection being a glossitis. McLaughlin's treatment consists of giving intravenously a 1 per cent solution of mercurochrome, in from 15 to 30 cc. doses, every three to five days. Improvement first manifests itself in a very marked increase of appetite, the patient seemingly not being able to get enough to eat. Most of the patients have had the disease two or more years. The majority of them have had blood transfusions a number of times. All have had iron and arsenic by mouth; some have had subcutaneous or intravenous injections of these drugs. Under this treatment the patients gradually grew worse, and most of them were very low in red blood cells and hemoglobin, when they entered the hospital for treatment.

Journal of Biological Chemistry, Baltimore

67: 1-350 (Jan.) 1926

*Effect of Administration of Calcium Salts and of Sodium Phosphate on Calcium and Phosphorus Metabolism of Thyroparathyroidectomized Dogs: Nature of Calcium Compounds of Blood and Their Relation to Pathogenesis of Tetany. I. Greenwald, New York.—p. 1.

*Fate of Creatine When Administered to Man. A. Chanutin, University, Va.—p. 29.
Iron in Nutrition. II. Quantitative Methods for Determination of Iron in Biologic Materials. C. A. Elvehjem and E. B. Hart, Madison, Wis. —p. 29.
Question of Interaction of Insulin, Muscle Tissue and Glucose. A. D. Barbour, Toronto.—p. 53.
Quantitative Determination of Dihydroxyacetone. W. R. Campbell, Toronto.—p. 59.
Potassium in Animal Nutrition. III. Influence of Potassium on Total Excretion of Sodium, Chlorine, Calcium and Phosphorus. H. G. Miller, Corvallis, Ore.—p. 71.
Occurrence of Urease in Blood Cells, Plasma and Tissues of Limulus. L. Loeb and O. Bodansky, St. Louis.—p. 79.
Effect of Histamine on Blood Chlorides. T. G. H. Drake and F. F. Tisdall, Toronto.—p. 91.
*Effect of High Protein Diets on Kidneys of Rats. H. Jackson, Jr., and M. D. Riggs, Boston.—p. 101.
Site of Ammonia Formation and Prominent Rôle of Vomiting in Ammonia Elimination. S. Bliss, Boston.—p. 109.
*Total Acid-Base Equilibrium of Plasma in Health and Disease. I. Concentration of Acids and Bases in Normal Plasma. J. P. Peters, H. A. Bulger, A. J. Eisenman and C. Lee, New Haven, Conn.—p. 141.
Id. II. Effect of Carbon Dioxide Tension on Concentration of Acids of Plasma of Oxygenated Blood. A. J. Eisenman, H. A. Bulger and J. P. Peters, New Haven, Conn.—p. 159.
Id. III. Differences Between Arterial and Venous Blood. J. P. Peters, H. A. Bulger and A. J. Eisenman, New Haven, Conn.—p. 165.
*Id. IV. Effects of Stasis, Exercise, Hyperpnea and Anoxemia: Causes of Tetany. J. P. Peters, H. A. Bulger, A. J. Eisenman and C. Lee, New Haven, Conn.—p. 175.
Id. V. Miscellaneous Pathologic Conditions. J. P. Peters, H. A. Bulger and C. Lee, New Haven, Conn.—p. 219.
Apparent Dissociation Constants of Creatine and Creatinine. G. S. Eadie and A. Hunter, Toronto.—p. 237.
Chemical Composition of Beef Blood. I. Concentration of Certain Constituents in Normal Beef Plasma. C. S. Robinson and C. F. Huffman, East Lansing, Mich.—p. 245.
Id. II. Composition of Blood of Dams and Calves Immediately After Calving. C. S. Robinson and C. F. Huffman, East Lansing, Mich. —p. 257.
*New Sulphur Containing Compound (Thiasine) in Blood. S. R. Benedict, E. B. Newton and J. A. Behre, New York.—p. 267.
Fat Solvents. C. E. Bills, Baltimore.—p. 279.
*Four Methods Commonly Used for Determination of Sugar in Blood. W. F. Duggan and E. L. Scott, New York.—p. 287.
Titrimetric Double Hydrogen or Quinhydrone Electrode Systems for Hydrion Determination: Applications to Urine and Blood. G. H. Meeker and B. L. Oser, Philadelphia.—p. 307.
Correction of Folin-Wu Blood Sugar Values. B. L. Oser and W. G. Knarr, Philadelphia.—p. 319.
Nitrogenous Components of Yeast Nucleic Acid. P. A. Levene, New York.—p. 325.
Structural Relationship of Cardiac Poisons. W. A. Jacobs and A. Hoffmann.—p. 333.
Conversion of Optically Active Lactic Acid to Corresponding Propylene Glycol. P. A. Levene and H. L. Haller, New York.—p. 329.
Metabolism of Amino and Fatty Acids. H. D. Dakin, Scarborough-on-Hudson, N. Y.—p. 341.

Effect of Administration of Calcium and Sodium Salts on Metabolism.—Greenwald says that the administration of calcium salts to thyroparathyroidectomized dogs led, at first, to a deposition of a large part of this calcium in the tissues, chiefly as calcium phosphate. Later, calcium equilibrium was attained. A parathyroidectomized dog receiving a liberal supply of calcium had a normal concentration of calcium in the serum and was resistant to the administration of sodium phosphate (50 mg. of phosphorus per kilogram of body weight) as were normal dogs. Later, when the supply of calcium was diminished, the concentration of calcium in the serum was much less, and the injection of the same amount of phosphate was followed by tetany. It is suggested that the calcium content of the plasma is, normally, maintained at a constant level by an equilibrium between inorganic calcium and an organic compound of calcium. Resemblances between this organic compound and calcium citrate are indicated, but the substances are not identical. It is suggested that the parathyroid hormone is necessary to the preparation of this organic constituent. The implications of this hypothesis are discussed.

Fate of Ingested Creatine.—Evidence is presented by Chanutin to indicate that creatine has an indirect action on nitrogen metabolism. The absorption of creatine from the alimentary tract appears to be complete. There is no evidence of its bacterial destruction in the alimentary tract. The creatinine content of the urine in man increases after ingestion of large doses of creatine. Data are presented to prove that extra creatine excretion is derived directly from the creatine fed.

Effect of High Protein Diet on Kidney.—By feeding very high protein diets for from ten to twenty months, about a third of a rat's life, Jackson and Riggs have been unable to produce in these animals any recognizable nephritis.

Acid-Base Equilibrium of Plasma.—Peters et al. state that there is a general tendency for protein, bicarbonate and chloride to reciprocate in their changes and to aid one another in maintaining the total acid and total base at a constant level.

Disturbance of Electrolyte Equilibrium.—It is suggested by Peters et al. that any given disturbance of electrolyte equilibrium will evoke a train of reactions and changes in all the other electrolytes. These reactions always tend to restore equilibrium. The response is not directed toward the maintenance of the concentration of any single constituent or group of constituents, but will be manifested to a greater or less degree in one or the other according as it may best serve to restore the equilibrium and maintain the functional automatism of the whole organism.

Thiasine in Blood.—In pig and human blood the thiasine is contained wholly in the corpuscles. Benedict, Newton and Behre have determined the thiasine content of nearly 200 human bloods. Results show a thiasine content averaging from 14 to 15 mg. per hundred cubic centimeters of blood for a large group of unselected hospital and ambulatory cases. The highest figures have been obtained in diabetic cases, many of which show from 20 to 27 mg. of thiasine per hundred cubic centimeters of blood. In nephritis, on the contrary, the tendency is to normal or unusually low figures.

Comparison of Blood Sugar Tests.—Four different methods of determining blood sugar values have been compared by Duggan and Scott. The Folin-Wu and Hagedorn methods were found to be accurate and fairly precise when used to determine the concentrations of pure glucose solutions approximating those encountered in blood analysis. It was found that an increase in the concentration of either the sugar or of the picric acid in the Benedict method would lead to high results, and this is offered as at least a partial explanation of the high results obtained by this method in certain pathologic bloods. The Shaffer-Hartmann method was found to be reliable and satisfactory for concentrations above about 25 mg. per hundred cubic centimeters of blood. Certain corrections also appear to be necessary to their table. A substitute table is submitted.

Missouri State Medical Association Journal, St. Louis

23: 43-88 (Feb.) 1926

*Radical Treatment of Trigeminal Neuralgia. E. Sachs, St. Louis.—p. 43.
Status Lymphaticus. M. P. Neal, Columbia.—p. 47.
Management of Fracture of Femur. H. E. Pearse, Kansas City.—p. 55.
Rupture of Uterus During Labor: Case. W. L. Clapper, St. Louis. —p. 59.
Obstetric Technic in Modern Hospital. F. B. Kyger, Kansas City.—p. 62.
Kielland Obstetric Forceps. W. C. Gayler, St. Louis.—p. 63.

Radical Treatment of Trigeminal Neuralgia.—In treating trigeminal neuralgia, Sachs has extracted the posterior root of the gasserian ganglion in seventy-one operations, without a death. In forty-two cases alcohol injections were given. In the vast majority of cases the patients are satisfied and tremendously pleased with the relief they have obtained. A few find the numbness or paresthesia annoying, but this is so rare that Sachs has no hesitation in recommending this procedure for the treatment of major trigeminal neuralgia.

Philippine Islands Medical Association Journal, Manila

6: 1-36 (Jan.) 1926

*Tumors from Aberrant Thyroid Tissue. P. Guazon.—p. 1.
Duality of Yaws and Syphilis. P. D. Gutierrez and P. N. Villaseñor, Manila.—p. 5.
*Sodium Citrate as Hemostatic. A. B. M. Sison and P. Ignacio.—p. 11.
Traumatic Rupture of Lungs without External Injury: Its Medicolegal Aspect. A. Villegas and S. de Los Angeles.—p. 15.

Aberrant Thyroid.—Guazon reports a case of aberrant thyroid and two cases of papilloma of the thyroid.

Sodium Citrate as Hemostatic.—Sison and Ignacio regard sodium citrate as one of the most powerful and effective hemostatics, especially in arresting inaccessible hemorrhages. They have used from 20 to 30 cc. of a 30 per cent sodium

citrate solution, previously sterilized, and from 1 to 2 cc. of a 0.5 per cent solution of procaine. Hot water bags must be applied over the place of the injection to minimize the pain and, if need be, some morphine may be administered. While they have given intravenous injections, the intramuscular route is preferred.

Southern Medical Journal, Birmingham

29: 87-156 (Feb.) 1926

*Iodine in Treatment of Hyperthyroidism. H. M. Thomas, Jr., and W. F. Rienhoff, Baltimore.—p. 87.
*Angina Pectoris. J. Philips, Cleveland.—p. 95.
*Gastric Acidity. D. N. Silverman and W. Denis, New Orleans.—p. 100.
*Treatment of Chorea. H. L. Dwyer, Kansas City, Mo.—p. 101.
Club-Hand Associated with Congenital Syphilis. E. C. Schwartz, Fort Worth.—p. 105.
Cholecystography for Ambulatory Patients. S. Moore, St. Louis. —p. 106.
Id. L. P. Gay and S. Moore, St. Louis.—p. 109.
Simple Suction Apparatus. P. W. Flagge, High Point, N. C.—p. 112.
Standardization of State Bureau of Vital Statistics. W. H. Davis, Washington, D. C.—p. 113.
Operative Correction of Facial Palsy. V. P. Blair, St. Louis.—p. 116.
Conservation of Uterus in Surgery of Fibroids. C. J. Miller, New Orleans.—p. 120.
*Muscle Reeducation in Early Treatment of Anterior Poliomyelitis. E. S. Hatch, New Orleans.—p. 123.
*Acute Peritonitis. R. M. Harbin, Rome, Ga.—p. 127.
Inguinal Hernia. R. A. Woolsey, St. Louis.—p. 131.
Obstetric Shock. J. Akerman, Augusta, Ga.—p. 134.
Iniencephalus: Case. J. D. Guess, Greenville, S. C.—p. 136.
Newer Procedures and Methods in Plastic Surgery of Face and Neck. G. B. New, Rochester, Minn.—p. 138.
Trachoma. J. A. Stucky, Lexington, Ky.—p. 140.
Present Day Medical Education. E. R. Clark, Augusta, Ga.—p. 145.

Iodine in Treatment of Hyperthyroidism.—Compound solution of iodine was used by Thomas and Rienhoff in the treatment of thirty cases of exophthalmic goiter. After the patients had received this solution for three or five days, the restlessness and nervousness became less marked, the tremor diminished and in many the skin was less flushed. In most cases the maximum results were obtained in from five to fourteen days. In three cases the maximum result was not obtained until between the twenty-first and twenty-fifth day. The basal metabolic rate decreased in all of the cases, varying from 11 to 72 per cent, an average fall of 34 per cent. In 50 per cent of the cases, the rate was reduced to normal. In 33 per cent of the cases the basal metabolic rate was reduced to below 40 per cent above normal, and in 6 per cent the reduction was so slight that rest in bed alone might account for it. In most instances when the patients were operated on their basal metabolic rate was not more than plus 30 per cent.

Angina Pectoris.—Philip's discussion of angina pectoris is based on a study of the literature and on the personal observation of 179 cases. The clinical history is fully reviewed and treatment is outlined. Philips believes that operative treatment should be limited to that extremely small group of cases in which the paroxysms of anginal pain recur so frequently as to make life unendurable.

Gastric Acidity.—Comparisons made by Silverman and Denis of their colorimetric method with the scientifically accurate electrometric determinations have shown the former to be correct within hundredths of a degree.

Treatment of Chorea.—The results of treatment of sixty-two cases of chorea are described by Dwyer. Magnesium sulphate, in 25 per cent solution, given intramuscularly, has a definite sedative action in the majority of cases. Typhoid vaccine, containing from 20 to 40 million killed typhoid bacilli in each dose, is often beneficial in the long continued mild case or the case in which the most marked symptoms have disappeared and some residual chorea persists. The autoserum therapy has given good results in the few instances in which it was tried. Horse serum, intrathecally, as advocated by Porter, gave good results in a few instances and no results in many others. Chorea serum furnished by Rosenow produced no appreciable benefit. Relieving intracranial pressure by spinal puncture was not found beneficial, although it was not tried in enough patients to give it a fair estimate of its value. Neo-arsphenamine was without any benefit. The use of salicylates is thought to be beneficial only when there is evidence of an active rheumatic infection, and chloral and bromides are often necessary as sedatives in the severe cases.

Muscle Reeducation in Anterior Poliomyelitis.—Hatch avers that muscle reeducation given after all pain and sensitiveness has subsided, and by fully trained associates, is the greatest aid in the treatment of anterior poliomyelitis. Overuse of the weak muscles must be guarded against carefully. The use of as little apparatus as possible is urged.

Treatment of Acute Peritonitis.—For draining the ileum and to introduce fluids into the rectum, Harbin uses an intestinal aspirator of corkscrew shape.

United States Veterans' Bureau Medical Bulletin, Washington, D. C.

2: 103-222 (Feb.) 1926

Certain Phases of Focal Infection Observed in Diagnostic Center. R. S. Morris, Cincinnati.—p. 103.
Improvement in Out-Patient Service: Medical Records. M. M. Davis. —p. 108.
Organization and Administration of Medical Divisions of Regional Offices. W. Adams.—p. 113.
Vocational Aspect of Occupational Therapy. H. G. Kefauver.—p. 118.
True Mystery Story: Case of Impersonation. H. A. Burns, Minneapolis.—p. 133.
Relative Value of Roentgen Ray and Physical Signs in Diagnosis and Treatment of Pulmonary Tuberculosis. L. H. Fales, Livermore, Calif.—p. 140.
Management of Receiving Ward of Tuberculosis Hospital. I. Thomas, Whipple, Ariz.—p. 153.
Hyperthyroidism: Exophthalmic Goiter. D. L. Liberman, Chillicothe, Ohio.—p. 157.
Epilepsy: Diagnosis and Treatment. W. A. Boyd, Perry Point, Md. —p. 165.
Oral Prophylaxis in Hospital for Psychotic. P. O. Fallon, Northampton, Mass.—p. 181.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 359-408 (Feb. 27) 1926

Surgical Aspects of Certain Disturbances of Involuntary Nervous System Met with in Alimentary Canal. J. Fraser.—p. 359.
Radiodiathermy in Treatment of Inoperable Malignant Disease of Upper Air and Food Passages. W. Milligan.—p. 364.
Action of Certain Alleged Intestinal Antiseptics. L. P. Garrod.—p. 367.
*Gastric Pain. C. Miller.—p. 369.
*Nephrectomy in Infancy. A. C. Morson.—p. 371.
Bromism: Sodium Chloride Treatment. H. C. Semon.—p. 372.
Operative Treatment of Cancer of Colon. C. C. Holman.—p. 373.
Appendix in Hernial Sac. A. J. Pirie.—p. 373.
*Bilateral Renal Aneurysm. F. H. Healy.—p. 374.
*Case of Pernicious Anemia. D. B. Sutton.—p. 374.

Gastric Pain.—Miller says that the visceral pain of indigestion is to be attributed to the condition and the behavior of the muscular wall of the stomach.

Nephrectomy in Infant.—Morson reports a case of nephrectomy for hydronephrosis in an infant, aged 7 months. The kidney was abnormal. It had two ureters, one leaving the kidney at the usual location, the other leaving from the upper pole. There was no communication between the two pelves. The two ureters united just before entering the bladder.

Bilateral Renal Aneurysm.—In the case cited by Healy, aneurysms were found on both renal arteries. The right renal artery was tortuous and presented a firm swelling, the size of a tangerine orange, at the entrance of the hilum. Three swellings, the size of peas, were present on subdivisions of the artery. The left renal artery had tumors in the same position, but on a slightly smaller scale. It was evident that the aneurysmal dilatation of the renal vessels was a sequel to arteriosclerotic changes. Examination of the heart showed marked concentric hypertrophy of the left ventricle, and atheroma of the coronary arteries. The brain showed sclerosis of all arteries, particularly of the basal. Three hemorrhagic sites were present: the oldest, the size of a walnut, in the right internal capsule; the intermediate, the size of a Spanish nut, in the left internal capsule; and the most recent, the size of a walnut, just anterior to the genu of the left internal capsule.

Atypical Pernicious Anemia.—Sutton records a case of pernicious anemia in which the erythrocytes numbered only 300,000 per cubic millimeter; leukocytes, 23,200; hemoglobin,

8 per cent; color index, 1.2. The duration of the disease was only twelve weeks. Many of the classic physical signs were not present.

1: 409-462 (March 6) 1926

Diagnosis by Pyelography. R. J. Willan.—p. 409.
*Splenic Anemia of Young Children Treated by Splenectomy. H. T. Ashby and A. H. Southam.—p. 411.
*Osteomalacia in Kashmir. K. Vaughan.—p. 413.
*Use of Lead Colloids in Treatment of Cancer. F. Coke and J. B. Cook. —p. 415.
*Surgical Treatment of Tic Douloureux. C. P. Mills.—p. 417.
*Actinomycosis Successfully Treated by Iodine in Milk. H. Chitty.—p. 418.
Rupture of Aneurysm on Branch of Left Renal Artery, Complicating Pregnancy. A. E. Chisholm.—p. 419.
Experimental Passage of Oocysts of Fish Coccidia Through Human Intestine. J. G. Thompson and A. Robertson.—p. 420.
Threatened Gangrene of Arm Due to Injury of Main Artery. A. Fullerton.—p. 421.
Septicemia Due to B. Aertrycke. R. V. Solly and J. M. Henderson.—p. 421.

Splenectomy for Splenic Anemia in Children.—Ashby and Southam draw attention to the possibility of treating cases of splenic anemia in young children by the removal of the spleen, and record three cases so treated after medical and roentgen-ray treatment had been found unsatisfactory. All the patients have recovered and appear greatly benefited by the operation.

Osteomalacia in Kashmir.—Vaughan says that osteomalacia is exceedingly common in Kashmir. Almost all Kashmir women who have borne children are affected in some degree, with the exception of the boatman class. These women live in the open air on large freight boats, work hard and feed with the men. They are too poor to cook their food much, and eat raw cucumbers, tomatoes, etc., with their rice. The worst cases are seen in the houses of the wealthy, who keep their women in seclusion, and among those of the poorer classes who do the same. Many deaths take place in childbirth owing to conditions consequent on osteomalacia, and as skilled assistance is not available, mother and child are often lost. Rickets is not common in Kashmir.

Lead Colloids in Treatment of Cancer.—Coke and Cook detail their experiences with lead in the treatment of twenty cases of inoperable cancer. One of the preparations used, a very stable colloidal suspension of lead and mercury containing 0.1 per cent each of mercury and lead, has given the best results. However, these results were, on the whole, in no wise different from those obtained by others with other forms of treatment—good, bad and indifferent.

Treatment of Tic Douloureux.—Mills prefers alcohol injections to operation in the treatment of these cases. Out of every four cases, three patients have been reasonably comfortable with injection and one has needed open operation.

Iodine Treatment of Actinomycosis.—From 5 to 10 minims of iodine in half a cup of milk, three times a day, has proved ample to effect a cure in the four cases of actinomycosis reported by Chitty.

China Medical Journal, Shanghai

40: 1-94 (Jan.) 1926

*Blood Pressure of Szechwanese Students. L. G. Kilbourn.—p. 1.
Mental Hygiene. R. M. Ross.—p. 8.
Age-Height-Weight Study of Cantonese School Boys. N. Keys and W. W. Cadbury.—p. 14.
Blood Sedimentation Test. J. R. B. Branch, L. C. Pien and P. C. Tung. —p. 27.
Vaccines and Serums: Production in China. T. F. Huang.—p. 39.
*Incidence of Appendicitis in Chinese. R. M. Gibson.—p. 43.
Caudal Anesthesia: 166 Cases. G. Y. Char.—p. 57.
*Dermoid Cysts in Young Girls: Two Cases. L. Pendleton.—p. 63.
Differential Diagnosis of Trachoma. F. Oldt.—p. 68.
*Acute Lymphatic Leukemia in Korea: Case. W. R. Cate.—p. 69.
*Mercurochrome in Typhoid in Children. B. Y. S. Koo.—p. 71.
Men Nurses in General Hospital. N. D. Gage.—p. 75.

Blood Pressure of Chinese.—The blood pressure of over 700 Szechwanese students was taken by Kilbourn. The mean systolic and diastolic pressures were lower than the standards for Anglo-Saxons of corresponding ages. The pulse pressure, on the other hand, was as high as that of the white races. The mean for 741 students was: systolic, 111 mm.; diastolic, 70 mm., and pulse pressure, 42 mm. Systolic and diastolic pressures of nine Canadian and American boys (mean age, 15), born and brought up in Szechwan, were markedly higher than those of the Chinese, but pulse pressure was about the same. The mean pressures found were: systolic, 120 mm.; diastolic, 80 mm., and pulse pressure, 40 mm. The records show no marked variation of blood pressure with age, within the limits investigated. Systolic and diastolic pressures vary with body weight, but the pulse pressure shows no constant variation.

Incidence of Appendicitis Among Chinese.—Of 815 bodies examined by Gibson eighty-one showed no evidence of recent or old inflammation of the appendix, and eight were affected with tubercular disease, secondary to abdominal tuberculosis. The appendix is often congested in diseases such as beriberi, dysentery and pneumonia, but these were not included unless other evidence of appendicitis was present. The milder types of appendicitis are common among Chinese, but the majority of those do not come to the hospital for treatment. Relatively few cases of the suppurative or gangrenous types occur, but in the larger cities most of those are brought to the hospital.

Dermoid Cysts in Young Girls.—Pendleton's patients were aged 12 and 13 years, respectively. In the second case, the ovarian tumor showed no sign of malignancy, nor did the surrounding structures contain any tumors, but in the urethra, at the meatus, was a metastatic tumor which proved to be a carcinomatous dermoid cyst. The tumor recurred after removal by the patient's father. It grew rapidly. Pendleton removed it radically, but inasmuch as the patient disappeared from view no further report of her subsequent condition can be made.

Acute Lymphatic Leukemia.—This disease is very rare in Korea. The chief points of interest in Cate's case were an acute onset and fulminating course; bleeding from the gums, intestines, nose, into the skin and finally into the meninges. The mucosa of the mouth was gangrenous. The lymphocyte count was 320,000, unusually high. At the end, violent central nervous system symptoms developed, then coma and death.

Use of Mercurochrome in Typhoid.—In eight cases of typhoid in children, Koo has injected 1 per cent aqueous solution of mercurochrome intravenously with good result. Moderate doses, 0.003 Gm. per kilogram of body weight, did not produce any reaction. The temperature fell by lysis. The drug was seen in the urine, stools and vomitus within a few hours after injection. Widal tests became negative within forty-eight hours. The dose may be repeated, if necessary. Koo is convinced that the drug shortens the duration of the disease.

Lancet, London

1: 377-426 (Feb. 20) 1926

Principles of Treatment in Relation to Diseases of Nervous System. E. F. Buzzard.—p. 377.
*Rôle of Mesentery in Visceral Disorders. H. T. Gray.—p. 381.
Focal Sepsis as Factor in Disease. G. R. Murray.—p. 387.
*Treatment of Rodent Ulcer. F. Hernaman-Johnson.—p. 389.
Case of Acute Fatal Medinal Poisoning. E. Stolkind.—p. 391.
*Unexpected Maternal Deaths Occurring During Parturition and Early in Puerperium. J. St. G. Wilson and E. Glynn.—p. 392.

Rôle of Mesentery in Visceral Disorders.—Gray is of the opinion that the mesentery receives too little attention in the study of visceral disease. In the health of the gastro-intestinal tract (and in the symptoms of disease of that tract), the mesentery is the first consideration. A great part of abdominal surgery should be directed toward the protection from damage of so vital a structure as the mesentery, whether by infection or mechanical trauma. In the latter instance, a large group of disorders arise primarily from visceroptosis, whether local or general. Treatment in such cases should always be directed toward protection of the mesentery from undue strain.

Radiotherapy for Rodent Ulcer.—Hernaman-Johnson regards radiotherapy as the treatment of election for "virgin" rodent ulcers. In the case of a recurrence, rays of a different wave length from those originally used should be employed. If improvement is not manifest within a month, some method of resensitizing the tissues, as by curettage or ionization, should be resorted to, after which radiation may again be given a trial. If the foregoing methods are not producing

definite and continuous improvement at the end of two months, the diathermic cautery should be employed. If all recurrences are dealt with promptly, there should be no need for surgery in the ordinary sense of the term. When, however, the recurrence has already assumed large proportions, it may be necessary to invoke the aid of the plastic surgeon to make good what has been destroyed.

Unexpected Maternal Deaths.—Wilson and Glynn report two cases: In one, death occurred during parturition from acute streptococcal septicemia following the induction of premature labor, and in the second case death occurred early in the puerperium due to delayed chloroform poisoning.

1: 427-476 (Feb. 27) 1926

Malaria Treatment of General Paralysis of Insane. W. Yorke.—p. 427.
*Operable Carcinoma of Breast Treated by Radium and Roentgen Rays. J. H. D. Webster, J. P. Thierens and F. G. Nicholas.—p. 431.
*Standardization of Tuberculin and Precipitin Test. C. C. Okell and Others.—p. 433.
Diagnosis and Treatment of Intrathoracic New Growths. L. S. T. Burrell.—p. 435.
*Case of Rupture of Thoracic Aorta. J. H. Sheldon and S. C. Dyke. —p. 436.
Diverticulitis and Its Surgical Treatment. J. P. Lockhart-Mummery. —p. 437.
Glycosuria in Acromegaly. K. S. Hetzel.—p. 440.

Radiotherapy of Operable Breast Cancer.—In the series of cases reported by Webster et al., every patient either refused operation, or else age, chronic bronchitis, heart disease, or glycosuria made operation inadvisable. The interim results suggest that such patients should be offered the alternative of radiation treatment more freely than they are at present; at least, they should not be told that there is no alternative to operation.

Standardization of Tuberculin and Precipitin Test.—Okell and six others report on the result of a joint investigation made by them as to whether tuberculins found to be equal (within the error of the test) to standard by the official Frankfort test on guinea-pigs could vary widely in their content of the active principles of "tuberculin," the substance used for the detection of tuberculosis in man and animals. Their findings may be summarized as follows: The precipitation test does not necessarily measure the active principles of tuberculin on which its use in the various methods of diagnosis of tuberculosis depends. Satisfactory agreement in precipitin unit value was obtained by two different groups of workers by the precipitin test. This test apparently measures with a considerable degree of accuracy a substance probably other than the active principle of tuberculin, and presumably the interesting precipitable substance of Mueller and Laidlaw. The "tuberculin" value of tuberculins which have been standardized by the official Frankfort method can not in all cases be deduced from the precipitin test. The results obtained by subcutaneous, intracutaneous, and Pirquet tests on guinea-pigs and by the tests on tuberculous human beings and cows were in agreement. By these three methods a tuberculin of standard strength and two others of values approximately 10 and 5 per cent of standard were placed correctly in order of merit.

Rupture of Thoracic Aorta.—In the case cited by Sheldon and Dyke rupture of the aorta occurred through an atheromatous plaque. The patient died nine days after the accident. The atheromatous condition of the aorta in this case was apparently a part of the diffuse disease of the intima of the vasculature, which is always associated with "primary chronic interstitial nephritis." Fatty change of the intima of the smaller vessels was a marked feature in microscopic sections of the kidney, and the spleen, the only other organ examined. Syphilis was definitely excluded in this case.

1: 477-530 (March 6) 1926

Experimental Epidemiology. W. W. C. Topley.—p. 477.
*Principles of Treatment in Diseases of Nervous System. E. F. Buzzard. —p. 484.
Gorilla and Man as Contrasted Forms. A. Keith.—p. 490.
*Associated Organisms Causing Empyema. H. E. A. Boldero and L. E. H. Whitby.—p. 492.
Encephalitis Following Operations on Temporal Bone. J. A. Jones.—p. 493.

Treatment of Epilepsy, Neurosyphilis and Disseminated Sclerosis.—Buzzard discusses the treatment of epilepsy, syphilis of the nervous system, and disseminated sclerosis, and lays emphasis on two principles which are of outstanding importance if any measure of success is to be attained. The first of these is early diagnosis associated with a frank recognition of the fact that preventive measures must be the mainstay in the struggle against the diseases under review. The second principle is that of taking courage in both hands and, in spite of the public demand for rapid cures, insisting on regulated treatment over long, perhaps indefinitely long, periods of time.

Associated Organisms Causing Empyema.—In the case reported by Boldero and Whitby, two organisms were associated in its production; the one a mycelium and the other a pneumococcus. Alone, neither was pathogenic to guinea-pigs, but in association they always produced lesions. Clinically, the striking feature of the case was its chronicity. Probably the start of the empyema can be dated from an attack of pneumonia, which occurred five months before the patient came under observation.

1: 531-584 (March 13) 1926

Experimental Epidemiology. W. W. C. Topley.—p. 531.
*Treatment of Malignant Disease with Lead. W. B. Bell and Others. —p. 537.
Functions of Spleen. J. Barcroft.—p. 544.
Toxicity of Carbon Tetrachloride in Treatment of Ankylostomiasis. M. Kjalil.—p. 547.
*Operative Treatment of Carbuncle. A. Edmunds.—p. 548.

Treatment of Malignant Disease with Lead.—Bell and his associates report on the results of the treatment of 227 cancer patients with lead. They believe that all types of malignant growths are probably amenable to the beneficial influence of lead, provided the metal can reach the malignant cells in sufficient quantity. Adjuvant surgical and radiologic measures in suitable circumstances may be employed with considerable advantage. When the growth has been partly, or apparently entirely, removed, intravenous injections of lead should be employed within a few days of the operation when possible. The method of treatment is difficult, and to some extent dangerous, and can only be employed safely by those who are thoroughly experienced in the work and have laboratory facilities at their disposal.

Treatment of Carbuncle.—Edmunds makes a crucial incision, dissects up the flaps, cuts away all suppurating tissue and packs the resulting cavity with cyanide gauze wrung out in 1:40 phenol. Thus, the whole area is opened up to the maximum extent, but with this advantage, four flaps of skin have been left—a little irregular and ragged perhaps—but capable of being replaced in a few days. The saving of the skin in no way hinders the drainage, while it accelerates healing very much and diminishes the size of the ultimate scar.

Medical Journal of Australia, Sydney

1: 147-176 (Feb. 6) 1926

*Water Snails of Monaro and New South Wales: Cercaria Carrying Capacity. B. Bradley.—p. 147.
Encephalitis. H. H. Marshall and K. Inglis.—p. 159.
*Staining of Intercellular Substance. J. M. Petrie.—p. 163.

Snails Carry Flukes.—Bradley found that a certain species of snails (*Limnoea brazieri*) showed a high percentage rate of infestation with fluke embryos, probably carrying several types. He is convinced that this snail is the transmitting agent of the sheep fluke in New South Wales.

Staining of Intercellular Substance.—It has been demonstrated by Petrie that the intercellular material forming the semifluid "ground substance" in certain endothelial tissues can be stained and made visible. This is due to the presence of a potassium compound in the intercellular cement substance. Fresh tissue is laid on a slide and treated with cobalt. After a certain time the slide is washed with ice-cold water till the excess of reagent is completely removed. If the slide is now examined under the microscope, the intercellular substance is seen to be formed of yellow precipitate, which is the triple salt of cobalt sodium potassium nitrite; when the preparation is subsequently treated with ammonium sulphide, this yellow compound is changed to black cobalt sulphide, which is permanent.

Annales de Médecine, Paris

18: 407-517 (Dec.) 1925

*Functions of the Infundibulotuberal Region. G. Roussy.—p. 407.
*Functional Relations Between the Pituitary Gland and the Tuberal Centers. R. Collin.—p. 428.
*Infundibular Diabetes Insipidus and Tuberal Diabetes Mellitus. J. J. Gournay and A. Le Grand.—p. 434.
*The Share of the Pituitary in Trophic Disturbances in Children. P. Lereboullet.—p. 452.
*Diabetes Insipidus of Syphilitic Origin. L. Babonneix and J. Lhermitte.—p. 471.
*Treatment of Lesions in Infundibulopituitary Region. G. Lévy.—p. 479.

Functions of the Infundibulotuberal Region and Its Relations with the Pituitary.—This entire issue of the *Annales* is devoted to tuberal syndromes. A full summary was given in the Paris Letter in THE JOURNAL, March 27, 1926, p. 964. Lereboullet emphasizes that the trophic disturbances in the bones are the most solidly established facts to date for which the pituitary can be incriminated. In the adiposogenital syndromes, and obesity of alleged pituitary origin, pathologic conditions in the hypothalamus probably cooperate more or less extensively. Diabetes insipidus in a woman who had died from cancer of the pleura and lung was explained by syphilitic changes involving the infundibulum, tuber cinereum and the stalk of the pituitary, while the pituitary itself was intact. The lesions thus were not glandular but in the nervous apparatus. Lévy discusses treatment of lesions in this region; organotherapy is a useful adjuvant, but treatment as for syphilis should always be given a thorough trial, she insists, under ophthalmoscopic control. The latter should be the guide also for surgical measures or radiotherapy, and extreme caution should be the watchword. The condition of the optic nerve is the criterion.

Archives des Maladies du Cœur, etc., Paris

18: 753-832 (Dec.) 1925

Intraventricular Conductibility and the Electrocardiogram. C. Pezzi.—p. 753.
Angina Pectoris from Projectile. E. Doumer.—p. 766.
*Heart Derangement in an Athlete. P. Meyer.—p. 772.

Functional Heart Block in Trained Athlete.—Meyer reports a case of this kind in a medical student devoted to out-of-door sports, especially skiing. He had taken part in several contests. He had never noted any signs of heart disturbance during strict physical training, and the consecutive fatigue. Nothing abnormal was revealed on clinical and roentgen-ray exploration of the heart. Nevertheless electrocardiograms showed retarded auriculoventricular conduction, the conduction time being almost twice as long as normal. Under the effect of exercises and atropine, the heart block disappeared entirely, thus testifying to the functional nature of the changes of rhythm. Evidently the heart disorder was caused only by physical strain, similar to another phenomenon noted in athletes, namely, nodal bradycardia.

19: 1-64 (Jan.) 1926

Rôle of Intracardiac Pressure in Bradycardia. L. Bard.—p. 1.
*Arterial Pressure After Ramisection. R. Leriche and R. Fontaine.—p. 21.
Paroxysmal Tachycardia and Arrhythmia. Gallavardin and Veil.—p. 30.
*Heart Symptoms in Case of Febrile Rheumatism. E. Doumer.—p. 33.
Hemohistioblasts in Myeloid Leukemia. J. Sabrazès.—p. 38.

Changes of Arterial Pressure After Ramisection.—Leriche and Fontaine observed a change in the arterial pressure after ramisection in fifteen cases in the last year. The operation consisted in severing the rami communicantes of the stellate ganglion and intermediary ganglion (when there was one). A transient increase of arterial tension appeared only on the operated side, and was soon followed by hypotension. On the other hand, there was always considerable rise of the oscillometer index on both sides, reaching its maximum in one or two days, and persisting for a few days. These phenomena can be explained only by the existence of centripetal nerves in the vascular adventitia—real pressor nerves controlling the arterial tension. Stimulation of them causes hypertension; severing them induces hypotension. The occurrence of vasomotor reflexes on both sides is probably due to the existence of only one vasomotor center in the medulla oblongata. The return of the arterial tension to normal, within a certain time after the operation, may be ascribed to the fact that the vascular tonus is thereafter regulated only by the centripetal fibers of the intact side.

Multiple Heart Disturbances in Acute Articular Rheumatism.—Doumer reports a case of febrile rheumatism associated with nodal bradycardia, retarded auriculoventricular conduction and auricular extrasystoles. The peculiar changes of the heart rhythm suggested that the interstitial nodules of the rheumatic myocarditis had affected the nerves of the heart more than the myocardium itself.

Bulletin de l'Académie de Médecine, Paris

95: 175-188 (Feb. 23) 1926

*Cancer a Hundred Years Ago. P. Menetrier.—p. 177.
*Artificial Immunization Against Tuberculosis. A. Calmette et al.—p. 182.

Cancer at Paris in 1826.—Menetrier compared the hospital cancer records at Paris and in Switzerland in the first quarter of the last century with those of the current year, and was amazed to find the average about the same: 14 per cent of all deaths over the age of 15 in 1825, and 10-12 per cent of all deaths in his Paris hospital service in recent years.

Vaccination of the New-Born Against Tuberculosis with BCG.—Ninety-four Paris infants inoculated with BCG vaccine in 1921-1922 were under supervision in 1925. Calmette and his co-workers state that all are healthy and developing normally, although seventeen of them were born and raised by tuberculous mothers. In the whole of France about 5,183 new-born infants were inoculated with BCG emulsion in the last six months of 1924. Of 1,317 infants supervised for six to eighteen months, 586 were exposed to tuberculous contamination. Among them, 7.2 per cent have died from non-tuberculous diseases, and 1.8 per cent from presumed tuberculosis. While the minimal mortality among nonvaccinated infants exposed to contamination, during the first year of life, is at least 25 per cent, certain French statistics show a mortality of 32.6 per cent or more. Of 117 infants inoculated with BCG vaccine in Belgium, ninety-two have been under regular observation. None of them have died from a presumed tuberculous affection, although forty-six were born and remained in a tuberculous environment. In French Indo-China, 3,352 native new-born infants were inoculated; and in French occidental Africa, 218. All are perfectly healthy. It appears that immunity from this vaccine, as revealed by the resistance to reinfection, lasts over three years. Five years' experience has demonstrated that inoculation with BCG vaccine is harmless, they say, and they advise its use as a prophylactic measure, especially in families in which the newborn are exposed to contagion. They reiterate that it must be applied within the first ten days of life. (This method of vaccination against tuberculosis with living bacilli was described in an editorial, Feb. 27, 1926, p. 626. It was also mentioned later, March 6, page 724.)

Comptes Rendus de la Société de Biologie, Paris

94: 97-168 (Jan. 22) 1926. Partial Index

*Herpes Zoster and Chickenpox. A. Netter and A. Urbain.—p. 98.
Cholesteremia in Mental Disease. H. Claude et al.—p. 102.
*Mixed Vaccines. G. Ramon and C. Zoeller.—p. 106.
The Blood in Rabbit Encephalitis. Remlinger and Bailly.—p. 112.
Etiology of Vaccination Encephalitis. Levaditi and Nicolau.—p. 114.
*Chloroform Sensitization. E. Bardier and A. Stillmunkès.—p. 118.
*The Acid-Base Balance in Epilepsy. L. Dautrebande.—p. 133.
Action of Ozone on Diphtheria Toxin. P. Nélis.—p. 139.
The Insulin and Phosphorus of Milk. I. I. Nitzescu.—p. 156.
*Influence of Drugs on Metabolism. Papilian and Bendescu.—p. 158.
*Action of Vagus in Hyperglycemia. Papilian and Funariu.—p. 159.

Relations Between Herpes Zoster and Chickenpox.—Netter and Urbain examined the serum of 100 subjects with herpes zoster and twenty-four with chickenpox, using the crusts for antigen. The crossed and homologous complement fixation tests were positive in 93 per cent in herpes zoster; and in 91.7 per cent in chickenpox. The amount of antibodies was minimal the first days of the eruption; maximal within the second week, but they persisted sometimes for as long as eighteen months. Crusts of chickenpox and of herpes were used in cases with herpes or chickenpox; or either of the crusts alone. The behavior of the antigen and antibodies was identical in all. Six cases of herpes zoster seemed to be responsible for development of chickenpox in persons who had been in contact with them. In two instances, zoster

developed in a chickenpox focus. In eight cases, herpes zoster accompanied chickenpox. It seems that the chickenpox virus inducing herpes has passed through a kind of mutation, analogous to that of the smallpox virus in relation to vaccinia. Owing to the mutation, it acquires certain properties. Thus in herpes the virus is more resistant than in chickenpox. While in chickenpox the virus disappears rapidly, in herpes it may persist inactive for a long time. Then, under the influence of various causes as, for instance, arsenical poisoning, the herpes virus may regain its activity and induce the zoster eruption.

The "Associated Vaccines."—Ramon and Zoeller injected 1 cc. of TAB vaccine—a mixture of typhoid and paratyphoid A and B vaccines—with 0.5 cc. of diphtheria anatoxin for the first injection, and with 1 cc. for the second, eighteen days later. Tests were made in subjects with a positive or negative Schick reaction. The results showed that addition of TAB vaccine does not affect the formation of diphtheria antitoxin in the blood serum. The same was evident with injections of TAB vaccine plus tetanus anatoxin. First 2 cc., and then 2.5 cc. of the associated vaccines were injected, with a fifteen days' interval; a third injection (1 cc.) was given eight days later. Then 1 cc. of the serum from these subjects neutralized from 1,000 to 3,000 lethal doses, and even more. No impairment in formation of tetanus antitoxin was noted from association of tetanus anatoxin with the diphtheria anatoxin. Ramon and Zoeller say that these experiences seem to open the field for simplified procedures in vaccination.

Chloroform Sensitization of Medulla for Cocaine.—Intravenous injections of cocaine were made in dogs, under chloroform. It was evident, Bardier and Stillmunkès say, that the chloroform had enhanced the susceptibility of the bulbar centers to the cocaine.

Acid-Base Balance of the Blood in Epilepsy.—Dautrebande's research seems to confirm the presence of an alkaline substance in the blood in epileptics. It has no affinity for carbon dioxide in vivo. This agrees with Bisgaard, Jarloev and Noervig's findings; they also noted in epilepsy the presence of an abnormal product of metabolism, giving an alkaline reaction.

Influence of Epinephrine, Atropine and Pilocarpine on Metabolism.—Papilian and Bendescu's observations were made on patients with mild eye diseases. They emphasize that epinephrine exaggerates the basal metabolism, while atropine checks it. Therefore stimulations of the sympathetic and parasympathetic system may only increase the basal metabolism.

Action of Vagus in Hyperglycemia.—Papilian and Funariu conducted experiments on dogs. Severing the vagus nerves prevented the appearance of glycemia from epinephrine and pilocarpine. Evidently the vagus may be partly responsible for an increase of sugar in the blood.

Journal de Chirurgie, Paris

26: 593-699 (Dec.) 1925

Treatment of Hydatid Cysts of the Liver That Have Opened into the Biliary Passages. F. Dévé.—p. 593.

27: 1-112 (Jan.) 1926

*Primary Tumors of Bones. P. A. Huet.—p. 1.
*Cancer of Undescended Testicle. L. Aurousseau.—p. 17.

Treatment of Primary Tumors of Bones.—Analysis of the ultimate outcome in thirty cases testifies that conservative measures, including resection, should be the rule for benign tumors in bones (chondromas, myeloplax or fibroid tumors and fibrocystic osteitis). Malignant tumors in bone call for amputation, and the criterion for the malignancy is not local recurrence—this may occur with a benign tumor—but metastasis at a distance, reproducing the structure of the primary tumor. If amputation is refused, the radiologist should be called in. Huet adds that the results from radiology cannot be worse than those from conservative measures for cancer of the bone.

Cancer of the Undescended Testicle.—Aurousseau summarizes seventy-six cases on record. He calculates that 10 per cent of cancers of the testicle affect the ectopic organ while there is only one testicle out of a thousand that is not in the scrotum. The ages ranged from 17 to 52. Only forty-four were given thorough operative treatment. Of the nineteen cases in which the ultimate outcome is known, there was recurrence in ten, but nine were known to be in good health from three months to eleven years later. In seventeen cases the cancer was discovered only at necropsy.

Journal d'Urologie, Paris

20: 353-448 (Nov.) 1925

*Resection for Gonorrheal Stricture. P. Bazy.—p. 353.
Nonradiopaque Bladder Calculi. P. Bazy.—p. 369.
Pyelonephritis After Prostatectomy. Gayet and Peycelon.—p. 371.
*Rupture of the Bladder During Cystoradiography. J. Rejsek.—p. 382.
*Urologic Congress Proceedings.—p. 388.

Resection of Perineum for Urethral Stenosis.—Bazy refers to Horteloup's method for treating gonorrheal strictures in cases with complications. The technic is generally known as the Albarran-Heitz-Boyer procedure. He describes its successful application in an extremely complicated case of long standing, and reviews forty-six analogous nontuberculous cases treated by various operative measures. The main point is to remove all the pathologic tissues, not leaving a trace of fibroid tissue, as sclerosis testifies to infection. Even the most attenuated infection is liable to be roused to virulence by the operation, and hence all sclerotic tissue must be eradicated. Simple edema of course should be respected; the swelling subsides after removal of all infected tissue. He sutured around the retention catheter, without preliminary diversion of the urine. On the other hand, he usually diverts the urine in treating traumatic strictures, when there is a prospect of suturing the stumps of the urethra smoothly together.

Rupture of the Bladder During Roentgen Examination.—Rejsek injected 120 cc. of the contrast suspension into the bladder of a robust man, aged 68, who had complained of bladder symptoms only for three months. The injection was made gently and was followed by an intense contraction of the bladder, but the severe pains persisted only for a short time after evacuation of the bladder. The roentgenogram revealed that the bladder had ruptured in the reaction to the injection. The opaque fluid formed a crescent above the bladder, but there was no extravasation of blood, and no trace of the rupture could be found in the bladder although considerable urine had escaped into the surrounding tissues. This was wiped out and the patient dismissed in two weeks. He succumbed to acute pneumonia not long after.

Urologic Congress.—The topic appointed for discussion was high diversion of the urine.

Presse Médicale, Paris

34: 209-224 (Feb. 17) 1926

*Tuberculous Serositis. N. Fiessinger and A. Lemaire.—p. 209.
Mechanism of the Heart Rhythm. E. Donzelot.—p. 211.
Postpartum Inversion of the Uterus. J. Sarf.—p. 212.
Some Diuretics. P. Pagniez.—p. 213.
Malaria in Syria. A. Gemayel.—p. 219.

Lipiodol in Diagnosis and Treatment of Tuberculous Serositis.—Direct injections of iodized oil were made by Fiessinger and Lemaire in five cases of hydropneumothorax, one of pyopneumothorax, one of purulent pericarditis, and one of tuberculous peritonitis with hypertrophy of the liver. They used light and heavy lipiodol (0.11 and 0.44 Gm. of iodine per cubic centimeter). First 5 cc. of the light was injected, then 5 cc. of the heavy. The injection was sometimes repeated three or four times, at fifteen or twenty days intervals. The roentgenograms showed then exactly the location of the effusion and its volume. The injections were valuable in diagnosis of interlobular or intrapulmonary effusions. No results were obtained in large pleural effusions; but a medium serofibrinous pleuritis and a small hydropneumothorax of the phrenicocostal sinus soon disappeared after the lipiodol injection. The latter corrected also the diagnosis, which had escaped the roentgen ray and puncture. Remarkable results were noted in a case of tuberculous pericarditis; three injections of lipiodol induced considerable improvement of heart weakness, subsidence of dyspnea, and resorption

of the effusion. A second injection on recurrence was followed by a similar effect, postponing the inevitably fatal outcome. The method is contraindicated in progressing tuberculosis, in which lipiodol seems to favor the spread of the lesions.

34: 273-288 (March 3) 1926

Tuberculosis of Middle Lobe of Right Lung. Sergent and Oury.—p. 273.
*Latent Syphilis and Pregnancy. E. Bertin.—p. 278.
Medical Impressions of Three Years in Paraguay. C. André.—p. 283.

Latent Syphilis and Pregnancy.—Bertin discusses the reactivation of latent syphilitic infection under the influence of a pregnancy. The latent syphilis is graver for the fetus than for the mother. Under successive abortions the infection may become attenuated. The Wassermann test, previously negative, may become positive during pregnancy, and again negative after childbirth. Localization of the spirochetes in the pelvic organs during pregnancy may induce a relative immunity. Thus may be explained the gradual attenuation of syphilitic infection, evident in repeated pregnancies. After a series of abortions, the women frequently give birth to fully developed infants with only slight traces of congenital syphilis. This may occur even if the women are not treated.

Revue Française d'Endocrinologie, Paris

3: 277-364, 1925

Histologic Relations Between the Pituitary and the Interbrain Centers. R. Collin.—p. 277.
Various Mechanisms of Regeneration of Thyroid Follicles in Adult Guinea-Pig. P. Florentin.—p. 284.
Histology of Tuber Cinereum and Nuclei of the Base in Operative Suprarenal Insufficiency. Urechia and Mihalescu.—p. 296.
Influence of Endocrine Secretions on Sprouting of Hairs. Schereschewsky.—p. 301.

3: 365-463, 1925

Internal Secretion of the Ovary and Ovarian Organotherapy. H. Vignes.—p. 365.
Evolution of Grafted Tissues and of Glands with Outlet Blocked. E. Retterer.—p. 380.
*Eunuchoid Adiposogenital Dystrophy. N. Schereschewsky.—p. 395.
*Ovarian Insufficiency, Melanoderma and Mental Disturbance. E. Bonilla.—p. 408.

Eunuchoid Adiposogenital Dystrophy.—A case is described in detail which combines various features of the Frölich type and of the eunuchoid type of adiposogenital dystrophy. The latter seems to be always a pluriglandular affection; in this case a severe infectious disease at the age of 8 (severe headache predominating in the clinical picture) was evidently a factor in the nondevelopment of the gonads. Before that the child had been apparently normal in every respect. Implanting of a testicle from another man (undescended testicle) at the age of 22 has failed to modify the condition in any way during the eight months to date.

Ovarian Insufficiency, Bronzing and Psychic Disturbances.—Bonilla has encountered eight cases of the syndrome described by Block in 1916, and he discusses melanoderma in general as connected with the endocrines and with sexual development. In the Block syndrome, the bronzing is undoubtedly the result of ovarian insufficiency without participation of the suprarenals. The ages ranged from 28 to 52, and there was in all a history of grave infectious disease or loss of property or unfortunate love affair or conjugal discord. The husband of one was impotent. None of the women had had for years or ever a normal sexual life, and Bonilla is inclined to accept a tendency to a premature menopause in some of the women. He remarks that the sexual function is one of the best stimulants of the genital internal secretions; it acts as a kind of auto-organotherapy. Hyperthyroidism was noted in only one of these patients, but ovarian insufficiency was pronounced in every case. In one, an injection of epinephrine induced an intense reaction, but Marañon has demonstrated that this is not pathognomonic for hyperthyroidism. The blood pressure and the cholesterol and glucose content of the blood testified against suprarenal involvement. Under ovarian treatment marked improvement was almost constantly realized; the pigmentation retrogressed more or less and the nervous symptoms subsided. He combined belladonna or thyroid treatment with the ovarian extract in some cases.

Revue Française de Pédiatrie, Paris

1: 529-656 (Nov.) 1925

*Weakness in Power to Grow. Murk Jansen.—p. 529.
*Infectious Jaundice. W. Mikulowski.—p. 576.
A Case of Cyclocephalus. J. Festal and Lieutaud.—p. 590.
Case of Calciuria ("Phosphaturia"). Rohmer and Corcan.—p. 598.
Therapeutics and Pharmacology of Last Two Years. M. LeLong.—p. 603.
Recent Works on Surgery in Children. H. L. Rocher.—p. 625.

Weakness in Power to Grow and Congenital Dwarfism.—Jansen asserts that when growth does not proceed normally, this is due to deleterious influences affecting the growing tissues, impairing their growing power, and that the degree of checking of the growth is determined by the rate at which the tissue was growing. This is the law of the vulnerability of cells that are growing rapidly. He explains how these principles throw light on the connection between rickets, achrondroplasia and other disturbances. What he calls weakness of growth entails excessive sensitiveness and readiness to fatigue. It appears first in muscles, as the muscles grow most rapidly at first. In the bones, the more rapidly growing parts are affected first. He gives photographs of a number of large families showing the effect on the growth of the children, of different injurious influences to which they were subjected at different ages. Unusually tall adolescents, children with genua valga, rickets, marasmus or pedatrophia represent the four main degrees of weakness of growth. In the mildest form it induces merely exceptional sensitiveness, so that growth is stimulated to excess. The male glands are especially sensitive; Jansen suggests that tobacco poisoning in the father may influence the growth of children born later.

Infectious Jaundice.—Mikulowski relates that in the last quarter of 1924 he encountered thirty-four cases of infectious jaundice in children at Warsaw. The onset was abrupt, with high fever, and the liver was large and painful in 80 per cent. The jaundice persisted for a week to a month but the course was mild on the whole. Contagion was evident.

Revue Médicale de la Suisse Romande, Geneva

45: 857-935 (Dec. 25) 1925

Paresthetic Meralgia. E. Long and J. J. Mozer.—p. 857.
Sporadic Hemophilia. R. Feissly and H. Curchod.—p. 868.
Treatment of Acne in Adolescents. C. Dubois.—p. 879.
Rare Complications of Appendicitis. H. Vulliet.—p. 889.
*Local Immunity in Mumps. A. Cramer.—p. 893.
Hypertension and Medication to Correct It. S. Katzenelbogen.—p. 897.

Local Immunity in Mumps.—Cramer treated a case of mumps localized exclusively in the sublingual glands. The boy, aged 16, had had mumps three years before, involving the parotid and submaxillary glands and accompanied by orchitis. Apparently these glands, vaccinated by the first attack of mumps, were refractory to the second infection. As the parotids and submaxillaries were thus immune, the mumps virus attacked the sublingual glands which it usually invades only exceptionally. Cramer considers this case as a demonstration of local immunity, induced by direct contact of the virus with receptive cells of the glands.

46: 1-64 (Jan. 25) 1926

Origin of Tumors. M. Marullaz.—p. 1.
Exclusion of the Appendix. P. Decker.—p. 31.
*Pathogenesis of Wilson's Disease. I. Mahaim.—p. 43.
The "Odor of Sanctity" and Brain Tumor. A. Repond.—p. 49.
Present Status of Prophylactic Serotherapy of Measles and Whooping Cough. P. Gautier.—p. 52.

Pathogenesis of Hepatolenticular Disease.—Mahaim created a biliary fistula in dogs and then injected alcohol in the biliary ducts, thus attacking directly the hepatic cells. Two of the animals died thirty-one and seventy-nine days later, with symptoms of progressive jaundice. Histologic examination revealed generalized lesions of brain cells, in the cortex as well as in the central nuclei. There were moreover vascular and neuroglia lesions confined exclusively to the central nuclei. The excessive fragility of these vessels and necrosis of the central nuclei suggest that the brain is not affected first in Wilson's disease, but secondarily to the liver. The vessels of the gray substance seem to be peculiarly susceptible to the still unknown, but probably different agents, and this may be responsible for the lesions in pseudosclerosis, parkinsonism, possibly also in chorea, Parkinson's disease and the lesions recently described by Steck.

Schweizerische medizinische Wochenschrift, Basel

56: 169-192 (Feb. 27) 1926

*Exploratory Excision in Cancer. F. Ludwig.—p. 169.
*Irradiated Milk. A. Hottinger.—p. 170.
Action of Mineral Waters. W. Singer.—p. 176.
Genital Tuberculosis and Sterility. P. Crevoisier.—p. 179.

Exploratory Excision in Cancer.—Ludwig regards the exploratory excision or curettement in carcinoma patients as exceedingly dangerous. He explains by this the generalization of apparently radically removed small tumors. Even the introduction of radium needles into the tumor is dangerous. Only in doubtful cases, and only when everything is ready for the operation, is exploratory excision permissible.

Irradiated Milk.—Hottinger confirms the antirachitic qualities of milk (human or cow's) irradiated with ultraviolet rays. The concomitant anemia is not influenced as long as the children are overfed with milk.

Rivista di Clinica Pediatrica, Florence

24: 73-144 (Feb. 20) 1926

Kala-Azar. P. Barbacci.—p. 73.
*The Blood with Tuberculous Bone Lesions. A. Muggia.—p. 89.
Laws on Maternity and Infant Welfare. G. Francioni.—p. 98.

The Blood Changes with Tuberculous Bone Lesions.—Muggia found in the blood of children suffering from tuberculosis of bones slight changes of the potassium and magnesium content. The sodium was slightly and the calcium strongly increased. With grave destruction of bone tissue, the calcium level was almost twice as high as normal.

Archiv für Gynäkologie, Berlin

127: 293-742 (Feb. 3) 1926

*Biology of the New-Born. K. Hellmuth.—p. 293.
*Trichomonas Vaginalis. A. L. Schmid and H. Kamniker.—p. 362.
Movements of Fallopian Tube. F. Kok.—p. 384.
Ovary Tumors in Children. G. Termeer.—p. 431.
Unusual Ectopic Pregnancies. C. Schoenhof.—p. 463.
Menorrhagia. A. Heyn.—p. 496.
Sedimentation Test in Cancer. Guthmann and Schneider.—p. 515.
Forceps Deliveries. E. Klaften and L. Bodnar.—p. 528.
Ectopic Endometrium. W. Schiller.—p. 544.
*Cause of Tubal Pregnancy. L. Schoenholz.—p. 609.
The Blood and Prognosis of Cancer. E. Holl.—p. 708.
*Acetonuria in Pregnancy. H. Kleesattel.—p. 717.
Blood Colloids in Sepsis. A. Tóth.—p. 729.

Biology of the New-Born.—Hellmuth investigated the lipoids of the serum and of the erythrocytes in pregnancies and in the new-born. Cholesterol and its esters, lecithin and fatty acids of the serum increase in pregnancy. Cholesterol esters occurred in the erythrocytes in twelve of thirty pregnant women. The toxemia of pregnancy had no characteristic influence. He found—contrary to others—esters of cholesterol in every specimen of blood taken from the umbilical vein. The infant has the maximum concentration in lipoids in the whole blood, the mother in the serum.

Trichomonas Vaginalis.—Schmid and Kamniker consider the trichomonas as pathogenic. A yellow discharge and considerable itching are the clinical symptoms. Lavage with a 0.1 per cent solution of mercuric chloride, followed by drying of the vagina and swabbing it with cotton dipped in 10 per cent borax-glycerol, is recommended. This treatment is repeated every other day for one week and twice in the second week. Vaginal suppositories containing 2 Gm. of 10 per cent borax-glycerol are introduced on the days without lavage.

Cause of Tubal Pregnancy.—Schoenholz concludes from his investigations that previous inflammation of the tube is seldom responsible for tubal embedding of the ovum. In most of the cases it is due to diverticula, in some to loose-meshed folds in the mucous membrane, and in some, perhaps, to the presence of cytogenic tissue in the tube.

Acetonuria in Pregnancy.—Kleesattel finds that pregnant women need more carbohydrates for utilization of fat than other subjects. He attributes this to a change of liver function, due to the endocrine action of the placenta and corpus luteum. He advises restriction of fat and proteins in the diet, especially in toxicoses.

Deutsche medizinische Wochenschrift, Berlin

52: 307-348 (Feb. 19) 1926

*Vaccine Therapy. H. Finkelstein.—p. 307.
*The Female Sex Hormone. III. S. Loewe et al.—p. 310.
Malaria Treatment of General Paresis. E. Meyer.—p. 313.
*Haff Disease. Scholz.—p. 314.
*Oygen Inhalation in High Altitudes. E. Stern.—p. 316.
*Reticulo-Endothelium and Poisons. Händel and Rosenzuaig.—p. 320.
Intended Suicide Indication for Abortion. H. Küstner.—p. 322.
Hysterical Paralysis of the Uvula. G. Boenninghaus.—p. 322.
Fracture of Os Pisiforme. A. Engel.—p. 323.
Diathermy in Intermittent Claudication. Determann.—p. 323.
Obstetric Speculum. Kritzler.—p. 325.
Station for Infectious Diseases. Schmoeger.—p. 327.
Social Hygiene. E. G. Dresel.—p. 328.
Vitamins. E. Nassau.—p. 342.

Vaccine Therapy.—Finkelstein discusses the question of vaccine treatment in children. He is quite skeptical: "An injection of vaccine the day before the crisis happens to arrive gives excellent results in lobar pneumonia." He quotes a few papers showing lack of autocriticism. In spite of this, he has seen good results in infections which possess a tendency to spontaneous healing. Gonococcus arthritis and conjunctivitis, and certain cases of acute pyodermia are suitable for it. He injects 500 millions of colon bacilli intramuscularly, and increases the dose rapidly if it fails to produce a local or general reaction. He saw a few surprising results with intravenous injections in typhoid, but a grave collapse observed in one of the successful cases caused him to discontinue the intravenous method. Children—except the tuberculous—usually stand more vaccine than adults. He strictly denies the value of vaccine treatment in pneumonia and whooping cough, and doubts it in pyelitis.

Female Sex Hormone.—Loewe, Lange and Faure state that when administering the female sex hormone by mouth to castrated animals, twenty-fold larger doses were required than with subcutaneous injections. Without regard to the species, the dose required was, so far, proportional to the weight of the animals tested.

Haff Disease.—The opinion of the faculty members of the University of Königsberg, published in this report, is opposed to the theory of direct poisoning with volatile arsenical compounds. Some of them believe that eels caught at a certain place were toxic. The mud taken from the spot induced a similar disease in young cats.

Oxygen Inhalation in High Altitudes.—Stern found in healthy and tuberculous subjects a tremor when they came to high altitudes. Administration of oxygen reduced it. The time of reaction to auditory stimuli is prolonged at the high altitudes. Oxygen shortened it in health. In some of the tuberculous subjects, oxygen prolonged it. The hardness of the muscles increased with high altitudes. After inhalation of oxygen, it increased further in the healthy but decreased in many tuberculous patients.

The Reticulo-Endothelial System and Poisons.—Händel and Rosenzuaig removed the spleen in some mice, and supplemented this in others with intravenous injection of colloidal iron oxide. These animals reacted to strychnine and quinine practically no more than the controls. With injections of cocaine, the splenectomized mice—especially those with splenectomy plus blocking of the reticulo-endothelium apparatus—reacted much more severely than the controls.

Wiener klinische Wochenschrift, Vienna

39: 205-232 (Feb. 18) 1926

Water Metabolism. W. Falta.—p. 205. C'td.
*Complications in Prostatectomy. O. Schwarz.—p. 209.
*Chemotherapy of Infections. P. Saxl et al.—p. 211.
*Athletic Sports, the Heart and the Action of Drugs. E. Kauf.—p. 212.
Changes of Immunology. W. Böhme.—p. 215. C'tn.
"Children Who Won't Eat." K. Peyrer.—p. 217.
Sequels of Constipation. O. Porges.—p. 218.
Research on Zoster. B. Lipschütz. Supplement.—pp. 1-16.

Complications in Prostatectomy.—Schwarz emphasizes the importance of preparation for prostatectomy—especially of a preliminary suprapubic fistula. He waits until the kidney function improves.

Chemotherapy of Infections.—Saxl, Donath and Kelen were able to protect rabbits against an otherwise lethal staphylo-

coccus infection by preliminary intravenous injections of acriflavine or other drugs, or by oral administration of acriflavine or scarlet red.

Athletic Sports, the Heart and the Action of Drugs.—Kauf found that subcutaneous injection of 1 mg. of atropine does not increase the pulse frequency in persons taking part in various sports. The pulse reaction to epinephrine was normal. He concludes that the vagus-accelerans equilibrium is shifted toward the vagus side by its preponderance.

Zentralblatt für Gynäkologie, Leipzig

50: 449-512 (Feb. 20) 1926

Delineation of Child's Skull. G. Schwarz.—p. 450.
Intra-Uterine Injury of Arms. K. Fink.—p. 455.
*Pulse Volume in Labor. W. Haupt.—p. 458.
Obstetric Maneuvers. H. Jentter.—p. 461.
Forceps and Mortality. St. v. Thurn-Rumbach.—p. 462.
Postpartum Hemorrhages. K. Atzerodt.—p. 465.
*Compression of Abdominal Aorta. H. O. Neumann.—p. 469.
Late Puerperal Hemorrhages. E. Klaften.—p. 474.
Missed Abortion and Labor. E. Kahn.—p. 479.
Vaginal Myomas. D. Tuberowsky.—p. 483.

Pulse Volume in Labor.—Haupt found usually a higher pulse volume immediately after a labor pain than later. It was especially higher than the volume during the pain.

Compression of Abdominal Aorta.—Neumann observed grave intestinal disturbances after application of the—as a rule—harmless Haselhorst compressorium to the aorta for fifteen minutes.

Mediko-Biologitchesky Jurnal, Moscow

3: 3-110, 1925

The Biochemical Factors of Sex Determination. G. Pighini.—p. 3.
Capillary Pulse in Aortic Insufficiency. A. Nesteroff.—p. 27.
The Multiple Phases of Hormone Action. V. Kogan et al.—p. 43.
The Blood Calcium in Endocrine Insufficiency. L. Perelman.—p. 52.
Study of Glycolysis in the Blood. N. Medvedeva.—p. 62.
*Vegetative System and Carbohydrate Metabolism. N. Mirtovsky.—p. 76.
Nerve Activity in Man and Dog. A. Ivanoff-Smolensky.—p. 84.
Functional Liver Disorder in the Insane. E. Lokshina.—p. 95.

Influence of the Vegetative Nervous System on Carbohydrate Metabolism.—Mirtovsky's experiments were conducted on dogs, cats and rabbits. Excitation of the vagus nerve was applied in fifteen animals, and the nerve was severed in thirteen. The results showed that the vagus has no direct influence on carbohydrate metabolism. The hyperglycemia following stimulation of the vagus is a psychic phenomenon, due to vegetative reflexes in the centers and sympathetic system. Decrease of glycemia after division of the vagus may be explained by gradual failing of the animal, and extinction of its vital motor functions. Severing the vagus in parathyreoprival tetany and experimental pancreatic diabetes did not modify the content of glucose in the blood. Removal of the striate bodies induced prolonged hyperglycemia analogous to that in diabetes mellitus or experimental pancreatic diabetes. Division of the vagus had no action on it. Hyperglycemia, following excision of the striate body, is induced chiefly by the glycogen of the liver, and probably without participation of the suprarenal secretion. Severing the splanchnic nerves prevented hyperglycemia after removal of the striate body. It appears that only the sympathetic system plays an active part in regulating the glucose content of the blood.

Nederlandsch Tijdschrift v. Geneeskunde, Amsterdam

1: 1-136 (Jan. 2) 1926

Difficulty in Extraction of Trunk. Tholen.—p. 2.
*Psychasthenic Depression or Melancholia? H. Breukink.—p. 8.
*The Heart in Epidemic Encephalitis. Y. Hanneman.—p. 12.
*Appendekthlipsia. A. Geesink.—p. 15.
*Tuberculous Meningitis in an Infant. P. Muntendam, Jr.—p. 20.
Puerperal Fever Merging into a Psychosis. A. de Groot.—p. 22.
*"Autostasis" and Medicine. F. M. G. de Feyfer.—p. 27.

Psychasthenic Depression Versus Melancholia.—Breukink remarks that all persons with a neurosis are trussed up in a harness, bound by all kinds of remembered and dreaded things. But the depression is, as it were, superposed, and the only way to remove it is by influencing the mind. All other therapeutic measures merely fasten the inferiority complex more firmly. On the contrary, the patient must be impressed with the idea that he does not need supports and props. Another point emphasized is the necessity for treating both man and wife when one has a neurosis, as the other is almost certain to be more or less affected. The environment must be instructed as to the way in which to respond to the patient's complaints; the constant pressure from the environment is a very potent factor in the aggravation or cure.

The Heart in Epidemic Encephalitis.—In four of the five selected cases the arrhythmia was pronounced, while in the fifth case the heart action was merely extraordinarily sluggish. Palpitations were one of the earliest symptoms of epidemic encephalitis in Hanneman's experience, and frequently gave the clue to the nature of the disease in the milder cases.

Appendekthlipsia.—Geesink has coined this term to designate a method of treating appendicitis when the tip of the appendix is so bound down by infiltration and adhesions that the usual technic is impossible. He severs the base of the appendix, turns in and sutures over the stump, and draws the detached base to the skin and fastens it. He has applied this procedure in two cases; in one the vessels were injured, and the appendix became necrotic and could be lifted out the fourth day. In the other case the appendix gradually shriveled and retracted, with no further disturbances.

Tuberculous Meningitis in Four Months Infant.—Muntendam describes the case of an infant succumbing to tuberculous meningitis at the age of 4 months. He ascribes it to birth injury from forceps delivery. The lumbar puncture fluid revealed no bacilli, but the symptoms and the fact that the child had lived for three weeks after birth in a room with a consumptive in the last stages of tuberculosis, rendered the diagnosis reasonable.

"Autostasis" and Medicine.—De Feyfer gives a historical sketch of the conceptions through the ages of the *vis medicatrix naturae*, the autostatic reaction processes, which produce the well rounded and harmonious life. The ancient Chinese symbol for it is the circle Tay-Ky, representing the positive, male and the negative, female forces of life. Health requires the balance complete between them. Disease is the encroachment of one on the other. The twentieth century has restored the ancient conception of the importance of the balance: the osmotic balance, the acid-base balance, loss of nervous balance, etc.

Ugeskrift for Læger, Copenhagen

88: 103-122 (Feb. 4) 1926

Six Simultaneous Cases of Cretinism in Danish Seacoast Town. O. Christensen.—p. 103.
*The Insulin Complement. C. Lundsgaard and S. A. Holbøll.—p. 106.
*Test Breakfast and Test Meal. Kramer-Petersen.—p. 108.
Poisoning with "Gople" Tea (Russian Fungus). Matthiessen.—p. 109.
The Medical Aspect of the New Penal Code. A. Wimmer.—p. 113. Cen.

The Insulin Complement.—This is the term proposed by Lundsgaard and Holbøll for the active substance or principle in muscle tissue which—when finely divided muscle tissue is added to insulin in vitro and placed in contact with a solution of glucose—transforms alpha and beta glucose into the form which they call "new glucose." Neither alone can accomplish this transformation; it requires the combination of both muscle tissue and insulin.

Test Meals.—Kramer-Petersen expatiates on the advantages of a test meal (soup, egg, potato and bread) when the findings with the test breakfast do not explain the patient's complaints. He gives the parallel findings in fifteen typical cases. The information thus derived is a guide to treatment with acids or alkalis; the test breakfast alone may not decide which is preferable.

88: 123-148 (Feb. 11) 1926

*Intracranial Hemorrhages. K. Sand.—p. 123.
Glycosuria and Psychoses. S. Hansen.—p. 127.
Alcoholism and the Death Rate. H. Rørdam.—p. 140.

Medicolegal Study of Intracranial Hemorrhage.—Sand discusses this subject from the theoretical as well as the practical standpoint, illustrated by concrete examples. He warns of the necessity for extreme caution in drawing conclusions, as all kinds of intracranial hemorrhage may occur with the slightest of trauma or even spontaneously, as well as with severe trauma; and lesions elsewhere may be decisive factors.